



United States Department of the Interior

NATIONAL PARK SERVICE
Rocky Mountain National Park
Estes Park, Colorado 80517

IN REPLY REFER TO:
L76

APR 15 2002

Dear Reader:

Enclosed for your review and comment is a draft Environmental Assessment (EA) for the Relocation of the Twin Owls and Gem Lake Trailheads for Rocky Mountain National Park. Three major themes are addressed in this EA:

1. **A proposed land exchange between the MacGregor Ranch and Rocky Mountain National Park**
2. **The proposed relocation of the Twin Owls and Gem Lake trailheads**
3. **The proposed realignment of the Black Canyon Trail**

Your input on these three themes is very important to us as we decide on the future of this very popular area of Rocky Mountain National Park. If we receive important new information, or if significant new issues are raised during the public comment period, we will revise the EA. **Your comments must be received in writing by close of business on May 20, 2002.** You can submit your comments to us in several ways:

- **By Mail or Express Delivery:** Superintendent, Rocky Mountain National Park, 1000 U.S. Highway 36, Estes Park, Colorado 80517
- **By fax:** (970) 586-1397
- **By e-mail:** romo_superintendent@nps.gov
- **Hand deliver:** Rocky Mountain National Park Headquarters, 1000 Highway 36, Estes Park, Colorado or to the Kawuneeche Visitor Center, Rocky Mountain National Park, 16018 U.S. Highway 34, Grand Lake, Colorado 80447

You must include your name and mailing address with any comments you provide. Our practice is to make comments, including names and addresses of respondents, available for public review during regular business hours. Also, we may be required to release your name and/or address if we receive a request for information that is covered by the Freedom of Information Act (5 U.S.C. 552, as amended). Individual respondents may request that we withhold their address from the record, which we will honor to the extent allowable by law. There also may be circumstances in which we would withhold from the record a respondent's identity, as allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Sincerely,

Anthony J. Schetzle
Acting Superintendent

Enclosure

**ENVIRONMENTAL ASSESSMENT
FOR THE
RELOCATION OF THE TWIN OWLS & GEM LAKE
TRAILHEADS**

Plate 32. Twin Owls from Devils Gulch Road. Original

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Location: This view north of the Twin Owls and Lumpy Ridge was taken 0.9 km northeast of the

intersection of sections 36 and 34, T35N R73W, at an elevation of 2338 m.

Original: c. 1900, unknown photographer, DPL.

U.S. Department of the Interior
National Park Service
Rocky Mountain National Park
Colorado

March 2002

Environmental Assessment

Rocky Mountain National Park Relocation of the Twin Owls & Gem Lake Trailheads

U.S. Department of Interior National Park Service

MARCH 2002

Abstract: This Environmental Assessment (EA) contains three major themes:

- 1. A proposed land exchange between Rocky Mountain National Park (RMNP) and the MacGregor Ranch that would enable the park and the ranch to clearly delineate their respective interests.**
- 2. A proposal to relocate the Twin Owls and Gem Lake trailheads and to construct a new parking lot for 80 to 100 vehicles at the new location.**
- 3. A proposal to realign a portion of the Black Canyon Trail so that it no longer crosses MacGregor Ranch grazing land.**

These measures are needed to accommodate the growing number of park visitors, reduce congestion, and reduce impacts to the MacGregor Ranch Historic District, which is listed on the National Register of Historic Places.

Four alternatives are proposed for the relocation of the Twin Owls and Gem Lake trailheads in addition to a No Action alternative. The preferred alternative would place the new trailhead and parking lot at the east end of the MacGregor Ranch.

The consequences of these actions on soils, water quality, vegetation, wetlands, wildlife and aquatic resources, threatened, endangered, and sensitive species, air, natural soundscapes, cultural resources, visual resources, visitor experience, the local and regional economy, park operations, MacGregor Ranch operations, and potential impacts to neighboring landowners are discussed in this EA.

Public Comments:

We welcome your comments on the draft EA and **specifically request your input on the three major themes outlined above**. If we receive important new information, or if significant new issues are raised during the public comment period, we will revise the EA. **Your comments must be received in writing by close of business on May 20, 2002.** You can submit your comments to us in several ways:

- **By mail:** Superintendent, Rocky Mountain National Park, Estes Park, Colorado 80517
- **By fax:** (970) 586-1397
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List of Abbreviations and Acronyms

ACHP	Advisory Council on Historic Preservation
EA	Environmental Assessment
NEPA	National Environmental Policy Act
NPS	National Park Service
RMNP	Rocky Mountain National Park
SHPO	State Historic Preservation Officer

Environmental Assessment
Rocky Mountain National Park
Relocation of the Twin Owls & Gem Lake Trailheads

Summary

Because of increasing visitor use since the 1970s, heavy use of the Twin Owls trailhead and parking lot has created problems for Rocky Mountain National Park (RMNP) and the MacGregor Ranch. The current parking lot does not meet public demand, there is no parking for vehicles pulling trailers, and there is inadequate space for vehicles to turn around, all of which contribute to heavy congestion during busy summer weekends.

Since 1980, the NPS has been considering the relocation of the trailhead and parking lot and creating a combined Twin Owls and Gem Lake trailhead. In 1983 RMNP acquired a 10.04-acre parcel and a 1.48-acre parcel at the east end of the MacGregor Ranch for this purpose. Over the years a full range of alternatives have been developed and evaluated by RMNP, the MacGregor Ranch and private landowners with additional input from the general public. Two previous Environmental Assessments (EAs) were prepared that focused solely on the relocation of the Twin Owls and Gem Lake trailheads. These EAs evaluated a range of alternatives and were released for public review in 1986 and 2000. The alternatives proposed in these earlier EAs did not fully address the concerns that were raised by the public, and no final decision was made regarding the future of the Twin Owls and Gem Lake trailheads.

Since the release of the most recent EA in June 2000, there have been additional discussions between RMNP staff, the MacGregor Ranch, neighboring landowners and other interested parties. Four potential sites for the location of a new trailhead and parking lot emerged from these discussions. In addition, the MacGregor Ranch proposed a land exchange between RMNP and the ranch. The exchange would provide additional land for RMNP and would transfer land that was part of a former grazing lease from the park to the MacGregor Ranch. The land exchange would enable RMNP to develop the new trailhead and parking lot, and would enable RMNP and the MacGregor Ranch to clearly delineate their respective interests. RMNP and MacGregor Ranch interests could be further defined by relocating a portion of the Black Canyon Trail so that it is located entirely on park land. At present, a portion of the trail crosses the MacGregor Ranch.

The objectives of the proposed trailhead relocation, land exchange and Black Canyon Trail realignment are to:

- Provide for RMNP visitor enjoyment and safety
- Protect park and MacGregor Ranch resources
- Provide for MacGregor Ranch visitor enjoyment and safety
- Minimize impacts to nearby private landowners
- Improve the efficiency of park operations

In addition to a No Action alternative, the four potential sites for the relocation of the Twin Owls and Gem Lake trailheads that will be evaluated in this EA are:

Alternative 1 – (Preferred Alternative) Consolidate the Twin Owls and Gem Lake trailheads and construct a parking lot for 80 to 100 vehicles at the east end of the MacGregor Ranch.

A parking lot for 80 to 100 vehicles would be constructed at the east end of the ranch partially on NPS-owned property and partially on land to be acquired from the MacGregor Ranch. An access road, approximately 1/3 mile long, would be constructed from Devils Gulch Road. A new trail would connect the parking lot to existing trails in RMNP. A land exchange between RMNP and the MacGregor Ranch would enable the park to acquire the land that is needed for the parking lot and access road and would enable the park and the ranch to clearly delineate their respective interests. A conservation easement would be placed on all NPS land that is transferred to the MacGregor Ranch. A portion of the Black Canyon Trail would be realigned so that it no longer crosses MacGregor Ranch grazing land. The Twin Owls and Gem Lake parking lots would be removed and the land reclaimed.

Alternative 2 -- Consolidate the Twin Owls and Gem Lake trailheads on the north side of Devils Gulch Road approximately 1500 feet east of the entrance to the MacGregor Ranch and construct a parking lot for 80 to 100 vehicles.

The NPS would acquire approximately 5 acres from the MacGregor Ranch for the construction of a parking lot for 80 to 100 vehicles. A short road would provide access to the parking lot from Devils Gulch Road. A new trail would head east from the parking lot and then north to connect with existing trails in RMNP. A land exchange between RMNP and the MacGregor Ranch would enable the park to acquire the land that is needed for the parking lot and access road and would enable the park and the ranch to clearly delineate their respective interests.

The 10.04-acre and 1.48-acre parcels currently owned by the NPS would revert to the MacGregor Ranch as part of the land exchange. These parcels would be conveyed to the Ranch because under this alternative they would no longer be needed for the purpose for which they were acquired in 1983 (i.e., to develop a new trailhead and parking lot). A conservation easement would be placed on the NPS land that is transferred to the MacGregor Ranch with the exception of the 10.04 and 1.48-acre parcels. The Ranch would like to have the option of selling or developing these two parcels in the future. A portion of the Black Canyon Trail would be realigned so that it no longer crosses MacGregor Ranch grazing land. The Twin Owls and Gem Lake parking lots would be removed and the land reclaimed.

Alternative 3 -- Consolidate the Twin Owls and Gem Lake trailheads on the north side of Devils Gulch Road at the entrance to the MacGregor Ranch and construct a parking lot for 80 to 100 vehicles.

The NPS would acquire approximately 5 acres from the MacGregor Ranch for the construction of a parking lot for 80 to 100 vehicles. The main access road to the MacGregor Ranch would provide access to the parking lot. A new trail would head east from the parking lot and then north to connect with existing trails in RMNP. A land

exchange between RMNP and the MacGregor Ranch would enable the park to acquire the land that is needed for the parking lot and would enable the park and the ranch to clearly delineate their respective interests.

The 10.04-acre and 1.48-acre parcels currently owned by the NPS would revert to the MacGregor Ranch as part of the land exchange. These parcels would be conveyed to the Ranch because under this alternative they would no longer be needed for the purpose for which they were acquired in 1983 (i.e., to develop a new trailhead and parking lot). A conservation easement would be placed on the NPS land that is transferred to the MacGregor Ranch with the exception of the 10.04 and 1.48-acre parcels. The Ranch would like to have the option of selling or developing these two parcels in the future. A portion of the Black Canyon Trail would be realigned so that it no longer crosses MacGregor Ranch grazing land. The Twin Owls and Gem Lake parking lots would be removed and the land reclaimed.

Alternative 4 -- Relocate the Twin Owls trailhead one mile west of its present location and construct a parking lot for 80 to 100 vehicles.

Alternative 4a - A parking lot for 80 to 100 vehicles would be located north of Black Canyon Creek on land currently owned by the NPS.

Alternative 4b – A parking lot for 80 to 100 vehicles would be located south of Black Canyon Creek on land to be acquired from the MacGregor Ranch.

Access to the parking lot would be via the 1.35-mile long Black Canyon access road, which would be upgraded to handle two-way traffic. A new trail would connect the parking lot to the Black Canyon Trail. A land exchange between RMNP and the MacGregor Ranch would enable the park and the ranch to clearly delineate their respective interests. For Alternative 4b, the land exchange would enable RMNP to acquire the land that is needed for the parking lot.

The 10.04-acre and 1.48-acre parcels currently owned by the NPS would revert to the MacGregor Ranch as part of the land exchange. These parcels would be conveyed to the Ranch because under this alternative they would no longer be needed for the purpose for which they were acquired in 1983 (i.e., to develop a new trailhead and parking lot). A conservation easement would be placed on the NPS land that is transferred to the MacGregor Ranch with the exception of the 10.04 and 1.48-acre parcels. The Ranch would like to have the option of selling or developing these two parcels in the future. A portion of the Black Canyon Trail would be realigned so that it no longer crosses MacGregor Ranch grazing land. The Twin Owls parking lot would be removed and the land reclaimed. The Gem Lake parking lot would not be removed.

Alternative 5 – No Action. Retain the Twin Owls and Gem Lake trailheads and parking lots at their present location.

The current parking lot, access road and trails would remain unchanged.

Preferred Alternative

Two previous Environmental Assessments (EAs) were prepared that focused solely on the relocation of the Twin Owls and Gem Lake trailheads (1986 and 2000). The

alternatives proposed in these earlier EAs did not fully address the concerns that were raised by the public, and no final decision was made regarding the future of the Twin Owls and Gem Lake trailheads. This EA addresses all of the issues and concerns that were raised by those who responded to the earlier EAs. This EA also addresses the issues and concerns that have been expressed during ongoing discussions between RMNP staff, the MacGregor Ranch, nearby landowners, and other interested parties.

Four alternatives and a No Action alternative will be fully evaluated in this EA. This evaluation will include an assessment of the potential effects on natural, cultural, and socioeconomic resources. The environmentally preferred and the NPS preferred alternative is Alternative 1 because it surpasses other alternatives in realizing the full range of environmental policy goals, and project objectives. Alternative 1 would accommodate park visitors, minimize traffic congestion, correct parking and access conflicts between RMNP and MacGregor Ranch, minimize impacts to landowners near the proposed parking lot, and provide for the protection of natural, cultural, and socioeconomic resources. Alternative 1 also incorporates several mitigation measures to minimize impacts to nearby landowners.

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CHAPTER 1

PURPOSE AND NEED

Rocky Mountain National Park (RMNP) is considering the relocation of the Twin Owls and Gem Lake trailheads and associated parking. This relocation will require the development of a new parking lot, an access drive, and connecting trails. In addition, RMNP and the MacGregor Ranch are considering a land exchange. The land exchange will enable RMNP to acquire the land that is needed for the new parking lot and access road and clearly demarcate recreational activities and natural resources within RMNP from those of the MacGregor Ranch, which is a working cattle ranch.

RMNP is located in north central Colorado and contains 415 square miles (1,704 square kilometers) of spectacular scenery, recommended and designated wilderness, and relatively undisturbed ecosystems (Figure 1). The enabling legislation for RMNP (38 Stat. 798) states that said area is *dedicated and set apart as a public park for the benefit and enjoyment of the people of the United States . . . with regulations being primarily aimed at the freest use of the said park for recreational purposes by the public and for the preservation of the natural conditions and scenic beauties* thereof (emphasis added)

The significance of RMNP lies in displaying, preserving, and availing for public use and enjoyment, some of the finest examples of the spectacular physiographic, biologic, and scenic features that typify the southern Rocky Mountains. These natural and historic resources are even more significant because of their proximity to the Front Range metropolitan areas.

The Gem Lake Trail probably predates the establishment of the park in 1915. The trail appears in a 1919 map of Rocky Mountain National Park. The current trailhead is located approximately 1.6 miles north of the town of Estes Park on Devils Gulch Road (Figure 2). The parking lot associated with the trailhead can accommodate about 18 vehicles and is located within an enlarged portion of the county road right-of-way. A portion of the parking lot is situated on private land. After leaving the parking lot, the Gem Lake Trail crosses private land for a distance of approximately $\frac{1}{3}$ -mile before entering RMNP.

Since the 1970's there has been a trailhead at Twin Owls (Figure 2). The trailhead provides access to the Black Canyon, Gem Lake and Lumpy Ridge areas of the park. The parking lot associated with the trailhead can accommodate about 30 vehicles. The only means of vehicular access to the existing Twin Owls parking lot is via the one-lane road that passes through the MacGregor Ranch.

Figure 1 - Rocky Mountain National Park

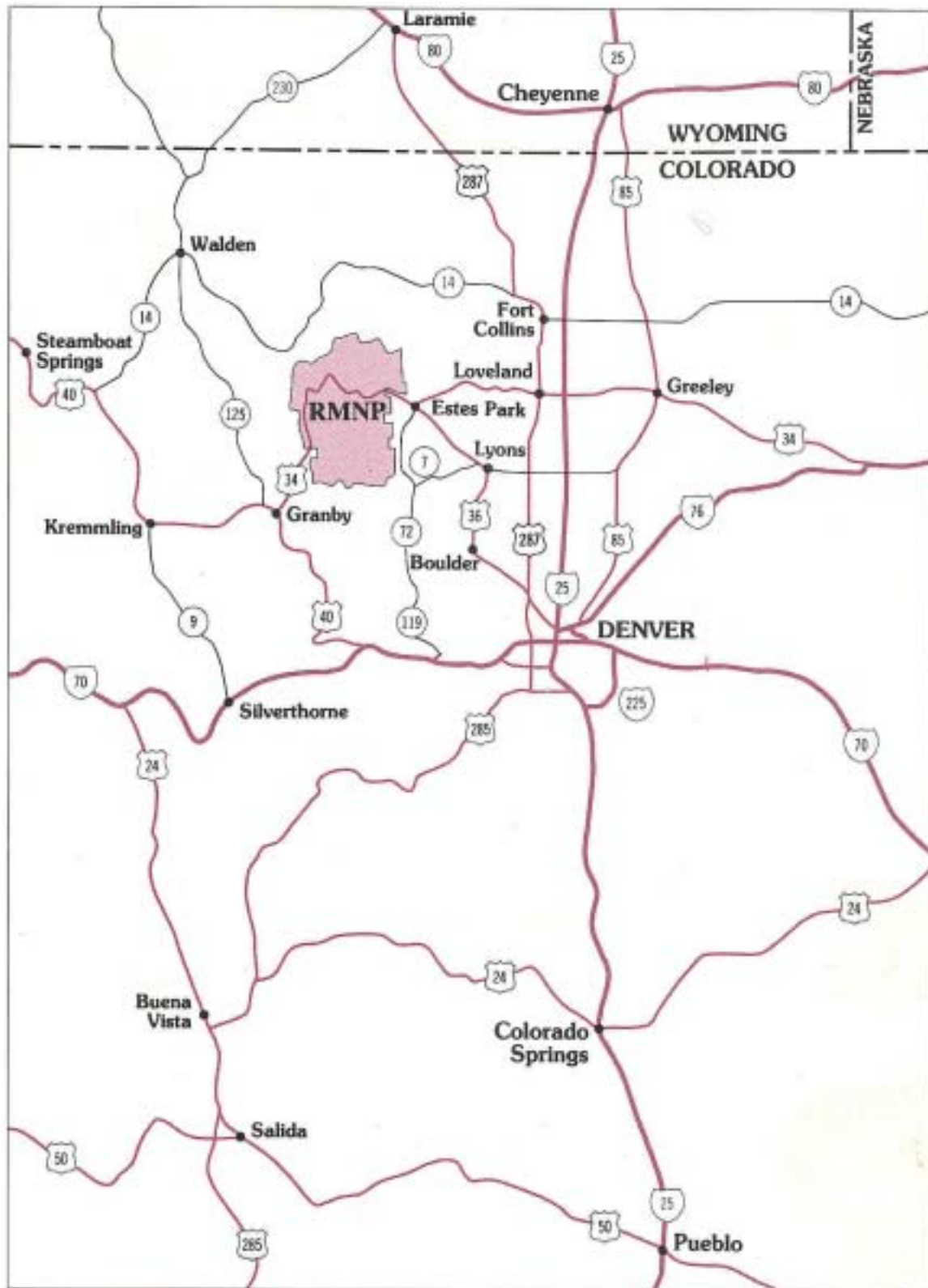
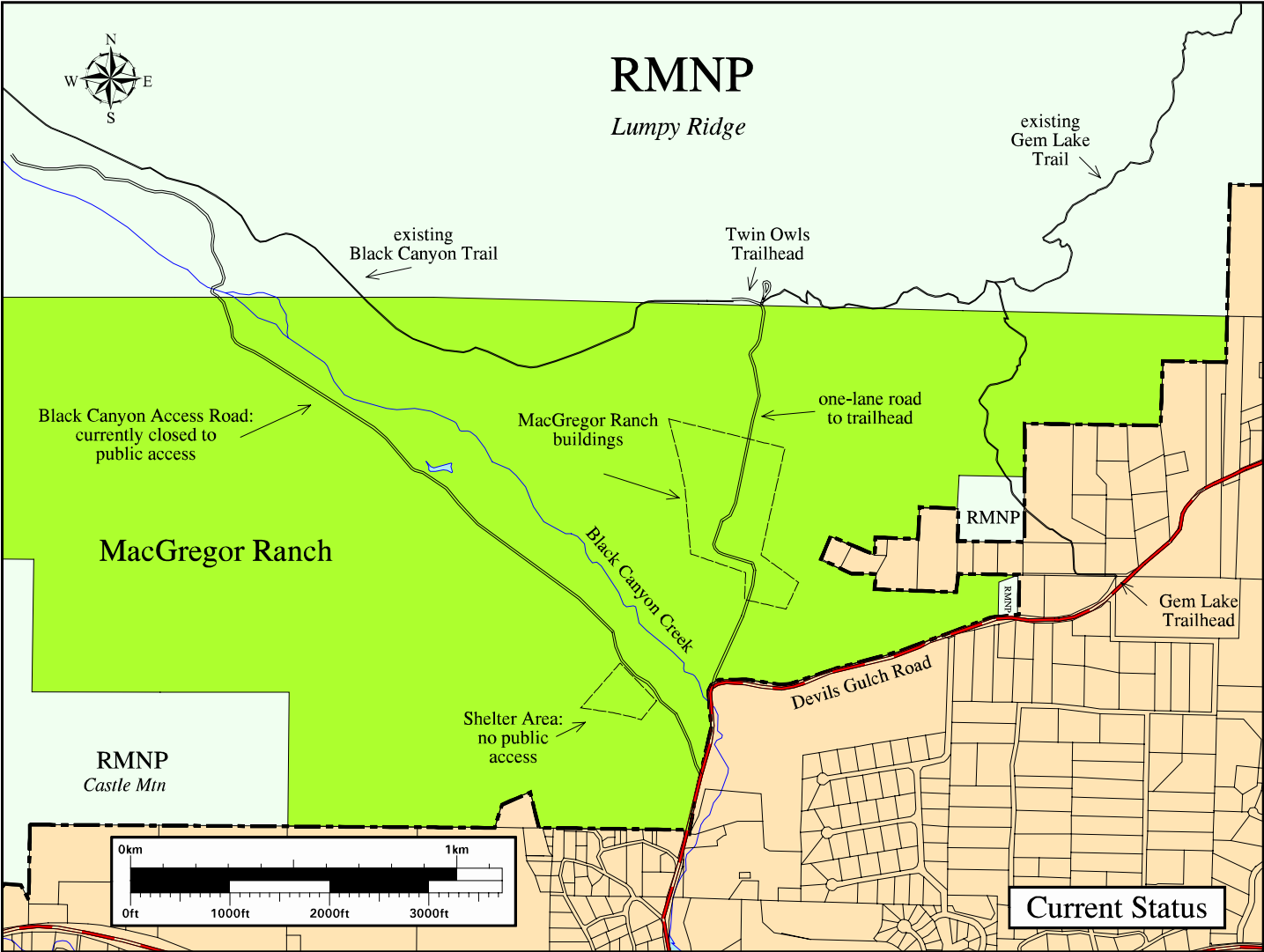


Figure 2 - Current Conditions



GIS Program, Rocky Mountain National Park

Gem Lake trails remain largely snow-free during the winter, and they are located within a five minutes from downtown Estes Park. Both trails provide superb views of the surrounding mountains, and they are accessible to hikers of almost all abilities.

Purpose and Objectives

The purpose of this EA is to evaluate the potential environmental, social and cultural impacts as they relate to the relocation and consolidation of the Twin Owls and Gem Lake trailheads, the associated land exchange, and the associated construction of a parking lot, trails and fences. The objectives of the proposed project are to:

Protect Natural and Cultural Resources

- Protect wildlife habitat on lands to be acquired from the MacGregor Ranch.
- Preserve the scenic qualities of the Lumpy Ridge area.
- Protect the National Register status of the MacGregor Ranch.
- Preserve the ranch's scenic qualities and historic ambiance.
- Assist the MacGregor Ranch Trustees to achieve their vision of operating the Ranch as it was 100 years ago. To accomplish this vision, modern intrusions must be removed from the MacGregor Ranch Museum area.
- Minimize impacts to prairie falcons, Northern goshawks and other birds of prey that nest on or near the numerous rock formations in the area.
- Minimize impacts to soil, water, vegetation, and other natural resources.

Provide for visitor enjoyment and safety

- Eliminate safety concerns for visitors, park personnel and emergency vehicles that must access the Twin Owls parking lot on a narrow one-lane access road.
- Provide adequate parking capacity for park visitors and accommodate vehicles pulling horse trailers. Currently there is no parking available for vehicles pulling trailers at either of the existing parking lots.
- Minimize traffic congestion.
- Continue to provide safe access to Lumpy Ridge for hikers and climbers.
- Eliminate a safety concern that currently exists because the access road to the Twin Owls parking lot bisects an area of the MacGregor Ranch that is used by 5,000 school-aged children each year.

Minimize impacts to nearby landowners

- Impacts to private landowners (sight, sound, dust, and stormwater runoff) are a primary concern and must be kept to a minimum.

Improve the efficiency of park operations

- Consolidate parking for the Twin Owls and Gem Lake Trailheads at one location that is located on NPS land. Currently the Gem Lake Trailhead parking area is located on the right-of-way for Devils Gulch Road, with possible encroachment onto private land.
- The new parking lot will be designed for safer snow removal, ranger patrol, and emergency access.
- The new parking lot will be paved for ease of maintenance and dust abatement.

Need for the Project

Because of increasing visitor use since the 1970s, heavy use of the Twin Owls trailhead and parking lot has created problems for Rocky Mountain National Park (RMNP) and the MacGregor Ranch. The current parking lot does not meet public demand, there is no parking for vehicles pulling trailers, and there is inadequate space for vehicles to turn around, all of which contribute to heavy congestion during busy summer weekends. The MacGregor Ranch is an historic cattle ranch that is listed on the National Register of Historic Places. To date, the Colorado State Historical Fund has contributed over \$250,000 toward restoration projects at the ranch. The mission of the Muriel L. MacGregor Trust, which owns and manages the ranch, is:

“To continue operation of the MacGregor Ranch as a high mountain historic working cattle ranch and to support youth education. This mission will be carried out by maintaining the presence of a cattle and horse herd, preservation and interpretation of historic buildings and educational tours. The focus of the Ranch will be on quality experiences through respect for the land, the ranch and its history – For the future generations of tomorrow’s leaders.”

In 1983 the National Park Service purchased a 1,221-acre conservation easement from the MacGregor Trust. The conservation easement encompasses the MacGregor Ranch Historic District, which includes the surrounding meadows that are used for cattle grazing and hay production. Therefore, RMNP has a vested interest in the future success of the ranching operation and preservation of the historic character of the ranch.

Every year, over 5,000 children visit the ranch. These include students from Estes Park schools, the Front Range of Colorado and Boy and Girl Scout troops from the western United States. These young visitors spend most of their time in and around the historic buildings located on the ranch. The current access road to the Twin Owls parking lot cuts through the middle of the homestead, and traffic on the road poses a risk to ranch visitors and disrupts the historic ambience of the ranch.

The existing Twin Owls parking lot has room for about 30 vehicles. During the summer months, particularly on weekends, the Twin Owls parking lot fills, often before 9:00 a.m. In the past, parking spilled over onto ranch property, causing damage to roadside vegetation. The ranch did not authorize parking on ranch property, and park rangers have no authority to enforce illegal parking on MacGregor Ranch lands, which is private property.

To protect roadside vegetation and prevent illegal parking on ranch property, the MacGregor Ranch built a fence along both sides of the access road during the winter of 1999-2000. Because the MacGregor Ranch maintains that the historic access was only one lane wide, the fence was placed at that width. This has made it very difficult for vehicles going in opposite directions to pass. There is also a concern about emergency response time in case of an emergency.

Because overflow parking can no longer occur on the MacGregor Ranch, park visitors are now parking along Devils Gulch Road in the vicinity of a sharp curve where the speed limit is 30 mph. This has given rise to new concerns about pedestrian safety.

Project Background and Scope

Background

The MacGregor Ranch was homesteaded in 1873 and is now listed on the National Register of Historic Places. The Ranch is located approximately $\frac{3}{4}$ -mile north of the town of Estes Park. RMNP was established in 1915, and the land where the current Twin Owls parking lot is located was added to the park in 1917. A residence for park employees was built at the base of the Twin Owls rock formation in 1917, and became the park superintendent's residence starting in about 1919 (RMNP Historic Structures, Vol. II). The one-lane access road to the residence followed the same alignment through the MacGregor Ranch as the current access road to the Twin Owls parking lot. In 1920 a second building was built that was subsequently called the Owl Ranger Station and later became the Assistant Superintendent's residence. The residence that was built in 1917 (Twin Owls #1) was removed in 1975 and the area restored to natural conditions. The second building still exists and is presently being used as seasonal housing for RMNP employees. The existing building (Twin Owls #2) was evaluated for eligibility for listing on the National Register of Historic Places in 1999 and found to be eligible. It was listed on the National Register in March 2001 (Bill Butler, personal communication).

The Gem Lake Trail was in existence prior to the establishment of Rocky Mountain National Park. Evidence suggests that in 1915 Clark Blickensderfer granted an easement for the Gem Lake Trail where it crosses private property near the Gem Lake trailhead.

When Muriel MacGregor, the last surviving member of the MacGregor family, died in 1970 a trust was established to continue the operation of the ranch. In the early to mid-1970s, a trailhead and parking lot were developed on NPS land near the existing residence. Hiking trails leading from the parking lot provided access to the Black Canyon, Gem Lake and Lumpy Ridge areas of the park. The parking lot is locally referred to as the Twin Owls parking lot, and accommodates about 30 vehicles. It is located just north of the MacGregor Ranch, and the historic one-lane access road provides the only means of access to the parking lot.

In 1976 RMNP acquired 393.38 acres in the Black Canyon area from the MacGregor Trust. This area is now classified as a Potential Wilderness Addition to the park. At the time of purchase, the MacGregor Trust retained the following:

- All rights to the Black Canyon Ditch, its structures, filings and decrees, together with the right of ingress and egress and the right to use, maintain and repair the same.
- Grazing rights upon said property for twenty-five (25) years.

The property acquired from the MacGregor Trust by RMNP contained an irrigated meadow, two water diversion dams located on Black Canyon Creek, and two irrigation ditches. The grazing rights expired in January 2001. However, the MacGregor Ranch still has the right to operate and maintain the diversion dams and the irrigation ditches that are currently located within the park. Through a land exchange with RMNP, the

MacGregor Ranch is interested in reacquiring approximately 70 acres of irrigated and dryland pasture that lies north and east of Black Canyon Creek. Included in this acreage are the two water diversions on Black Canyon Creek and the two irrigation ditches that belong to the MacGregor Ranch. The park is interested in acquiring MacGregor Ranch land containing rock formations and wildlife habitat located at the east end of the Ranch.

When RMNP purchased 393 acres from the MacGregor Trust in 1976, it acquired an unrestricted access to the property via an existing road that traverses the MacGregor Ranch. This one-lane road originates just south of the main entrance to the MacGregor Ranch on Devils Gulch Road. It then roughly parallels Black Canyon Creek for a distance of 1.35 miles before entering the park.

In the late 1970's the trustees of the MacGregor Trust became concerned about their ability to continue to operate the ranch. There was talk about selling portions of the ranch in order to finance the ranch operation and to settle claims against the estate of Muriel MacGregor. Negotiations with the NPS started at that time. A "Rocky Mountain National Park Boundary Study" completed in 1979 recommended that the park boundary be amended to include the MacGregor Ranch.

The NPS began to formulate plans for the relocation of the Twin Owls and Gem Lake trailheads in 1980. These plans included the acquisition of land at the east end of the MacGregor Ranch for the development of a new parking lot. On December 22, 1980, Congress passed Public Law 96-560 (94 Stat. 3272 Section 111(e)), which amended the boundary of RMNP to include several additions around the perimeter of the park, including the MacGregor Ranch. Congress gave the NPS until September 30, 1983 to complete the acquisition of the Ranch, which enabled the NPS to negotiate with the MacGregor Ranch Trustees on a possible purchase.

This information was made public in 1981 in a series of seven articles that were published in the Estes Park Trail-Gazette. On May 22, 1981 the Trail-Gazette published a front-page map showing the proposed NPS acquisition. The map defined the NPS interest in acquiring a 1,200 acre "scenic easement," trail easements, and two parcels of land at the east end of the MacGregor Ranch for trailhead parking.

A Trail Plan for Rocky Mountain National Park was formally adopted in April 1982 after a series of public workshops in Estes Park, Grand Lake, Boulder and Fort Collins. The Plan included a proposal to close the public access road across the MacGregor Ranch, restore the Twin Owls parking lot to natural conditions, and develop a new Gem Lake/Black Canyon trailhead at the east end of the MacGregor Ranch.

In 1983 Rocky Mountain National Park prepared a Natural Resources Management Plan and EA. This document included plans for NPS acquisition of a conservation easement on the MacGregor Ranch and fee simple acquisition of property to permit development of trailhead parking and trails for the Black Canyon and Gem Lake Trails. The plan was released for public review and comment in January 1983. Following a 60-day public comment period, a Finding of No Significant Impact (FONSI) was prepared. The FONSI was signed on May 18, 1983, and the Natural Resources Management Plan was approved on

May 26, 1983. Because the proposed land acquisition constituted a “major federal action,” the EA and FONSI fulfilled the National Environmental Policy Act of 1969 (NEPA) requirements that all federal agencies (1) prepare in-depth studies of the impacts of alternatives to proposed “major federal actions”; (2) use the information contained in such studies in deciding whether to proceed with the actions; and (3) diligently attempt to involve the interested and affected public before any decision affecting the environment is made.

On September 30, 1983, the NPS purchased a conservation easement on 1,221 acres of the MacGregor Ranch, thereby protecting this area from the residential development that very likely would have occurred. The purchase price was \$3,935,000.

The MacGregor Ranch property encompasses the lower portion of the Black Canyon drainage and serves as the foreground for the scenic Lumpy Ridge. The preservation of the MacGregor Ranch has accomplished several objectives:

- Protection of the aesthetic integrity of the adjacent national park lands.
- Protection of additional winter range for elk and mule deer.
- Preservation of the historic MacGregor Ranch structures and a working cattle ranch, which are typical of the early homesteads in the Estes Park area.
- Improved public access to about 4,000 acres of NPS land in the Lumpy Ridge and Black Canyon areas.

Although the NPS holds a conservation easement on 1,221 acres of the MacGregor Ranch located within the park boundary, the land remains in private ownership. The NPS has no authority over the MacGregor Ranch except to enforce the conservation easement.

On September 30, 1983 the NPS also acquired title to two vacant parcels of land located at the east end of the MacGregor Ranch. One parcel contains 10.04 acres, and the other parcel contains 1.48 acres. The parcels are located in close proximity to each other, with the smaller of the two located adjacent to Devils Gulch Road, which is administered and maintained by Larimer County, Colorado. These two parcels were acquired for the purpose of developing a new trailhead and parking lot to replace the Twin Owls and Gem Lake parking lots as described in the 1982 Trail Plan and the 1983 Natural Resources Management Plan. These two parcels are not included in the conservation easement that covers the MacGregor Ranch, and they are not subject to the development restrictions that have been imposed upon the Ranch.

The Estes Valley Development Code indicates that the two parcels are zoned RE-1, which is Rural Estate with a maximum density of 1 dwelling unit per 10 acres. Within this zoning district trails and trailheads (including parking facilities) are a use permitted by right.

At the time the two parcels were acquired from the MacGregor Trust, the NPS also acquired three trail rights-of-way:

- A right-of-way for the existing Gem Lake Trail where it crosses the MacGregor Ranch.
- A right-of-way for the construction of a trail to connect the 10.04-acre parcel to the current Twin Owls area.

- A right-of-way for the Black Canyon Trail where it crosses the MacGregor Ranch.

After purchasing the two parcels in 1983, the NPS began working on preliminary designs for a new trailhead and parking lot, and in 1986 released an EA for public review. The preferred alternative was to consolidate the Twin Owls and Gem Lake parking lots onto the two NPS owned parcels located at the east end of the MacGregor Ranch. Because these parcels are located in close proximity to existing single-family homes and seasonal cabins, there was neighborhood opposition to the proposal. During the review period 22 comments were received. A summary of the comments follows:

1. The existing Twin Owls and Gem Lake parking lots are not a significant problem that warrants the building of a new parking lot.
2. Noise – Adjacent landowners to the new parking lot are concerned about noise from vehicles and people using the parking lot.
3. Air Quality – Adjacent landowners are concerned about dust and requested that the road and parking lot be paved.
4. Drainage – Adjacent landowners do not want the new parking lot to impact their land.
5. Aesthetics – Adjacent landowners want the parking area to be screened from view by berming, fencing and planting mature evergreens.
6. Wildlife Impacts – How will the park minimize impacts to wildlife as a result of building a new parking lot?
7. Trail Access – How will the new access trail from the new parking area to the Black Canyon Trail impact MacGregor Ranch?
8. Adjacent landowners are concerned about trespassing, vandalism and theft.
9. The existing parking lot at Twin Owls impacts the MacGregor Ranch Historic District.
10. The inadequate size, circulation and lack of horse trailer parking in the existing parking lots needs to be corrected.
11. The visual impacts on MacGregor Ranch and the park from the existing Twin Owls parking lot will continue to exist until it is closed and restored to natural conditions

Because of the concerns expressed by neighboring landowners, the park chose to stay with the No Action alternative, which meant that no changes were made at that time.

In 1989 the MacGregor Ranch was listed on the National Register of Historic Places (NR89001008 - State site No. 5LR807). The National Register District Boundary corresponds to the 1,221-acre conservation easement that the NPS acquired in 1983. The district boundary also encompasses the 10.04-acre and the 1.48-acre parcels the NPS purchased in 1983. The MacGregor Ranch museum area consists of 29 structures that are clustered in an area of about 40 acres. Of the 29 structures, 19 are considered of historical significance. The access road to the Twin Owls parking lot passes through the homestead portion of the MacGregor Ranch.

In 1998, because of continued concerns about inadequate parking, traffic congestion, and escalating impacts to the MacGregor Ranch, RMNP again entered into discussions with the Ranch, neighboring property owners and other interested parties about the future of the Gem Lake and Twin Owls trailheads. RMNP was asked to examine all possible alternatives to resolve the situation.

In June 2000, RMNP released another environmental assessment that examined six (6) major alternatives. When the review period ended on September 30, 2000, the park had received 171 comments. A summary of the comments follows:

1. Does Lumpy Ridge really have the highest density of nesting birds of prey in the park?
2. Closing the Twin Owls parking lot will not enhance the breeding success of peregrine or prairie falcons.
3. Does vibration from passing vehicles really have a negative impact on the MacGregor Ranch buildings?
4. Has there ever been an accident between school children using MacGregor Ranch and vehicles driving to and from the Twin Owls parking lot?
5. Concerns from nearby landowners about lawsuits if a climber enters private land and is injured.
6. Private property will decrease in value because of impacts from the new parking lot.
7. The EA does not adequately address the rights of adjacent landowners.
8. Private landowners adjacent to the NPS parcels of land want to know why they should be impacted just so the MacGregor Ranch Trustees can be happy.
9. There is a concern that climbers are being lazy for not wanting to walk an additional 0.7 mile to access climbing routes west of Twin Owls.
10. There is a safety concern from climbers about the 0.7-mile additional hike to access climbing routes west of the Twin Owls rock formation by not leaving enough time in a day for a safe climb.
11. Some climbers who work in Estes Park like to drive to the Twin Owls parking lot and do a short climb or “bouldering” during their lunch break.
12. Concessionaires that offer guided climbs in the Lumpy Ridge area consider the extra walk to be a negative impact to their services.
13. Widen the road through MacGregor Ranch to 22 feet and then fence off the adjacent terrain preventing parking on ranch land.
14. The road through the ranch has been a public access road since the 1970’s. The NPS should take the necessary steps to secure a dedicated easement for ingress and egress.
15. Since RMNP purchased the conservation easement, and the ranch lies within the boundary of RMNP, does MacGregor Ranch really have the authority to put out no trespassing signs and lock gates?
16. Why does RMNP put more weight on impacts to MacGregor Ranch than impacts to landowners near the proposed new parking lot?
17. Senior citizens voiced concern about hiking a further distance from the new parking lot to the Twin Owls rock formation and about elevation gains.
18. The road through MacGregor Ranch is clearly public access by “Adverse Possession,” as proved by its 50 to 60 years of public use.

Each of the alternatives presented in the June 2000 EA was opposed by at least one interest group and no action was taken on any of the alternatives. Instead, park staff chose to continue discussions with all of the interested parties. Since September 2000, several meetings have taken place between park staff, the MacGregor Ranch, nearby landowners and other interested parties. The purpose of these meetings has been to explore potential alternatives, to determine the effects the potential alternatives could have on various interest groups, and to explore strategies for addressing impacts.

Relationship to Other Plans

The proposed project, including the preferred alternative, is consistent with the park's Master Plan (1976) and Statement for Management (1992). The Master Plan provides guidelines for the overall use, preservation, management, and direction of activities in the park. The proposed development and land exchange are consistent with Master Plan goals, including:

- Readjusting park boundaries on the basis of geographical and biological criteria in order to approach an ecological unity.
- To manage RMNP on a year-round basis, with full utilization in the summer and sightseeing and wildlife observations all year at the lower elevations.

The proposed improvements and the land exchange are consistent with the Statement for Management goals, including:

- Provide appropriate visitor services that create an opportunity for a safe and meaningful park experience.
- Provide and maintain appropriate facilities and support services essential to the park mission.
- Protect Park values from adverse external and internal influences.

Other park planning documents relevant to this EA include the Trail Plan (1982), Natural Resources Management Plan and EA (1983), and the Backcountry/Wilderness Management Plan (2001). Proposed improvements are consistent with the Trail Plan, which recommended the closure of the Twin Owls Parking lot and construction of a new access road and parking lot at the east end of the MacGregor Ranch. Proposed improvements are also consistent with the 1983 Natural Resources Management Plan and EA which recommended that lands be acquired from the MacGregor Trust for the purpose of developing a trailhead parking lot and connecting trails for the Black Canyon and Gem Lake trails. Proposed improvements are also consistent with the Backcountry/Wilderness Plan by providing continued and improved access to backcountry trailheads. It also falls within the scope of the implementation of the RMNP Transportation Management Plan (draft in progress), which provides direction for transportation in the park.

Issues and Impact Topics

Issues

Issues are defined as, “environmental problems that might occur if the proposed action or the alternative and sub-alternatives are undertaken.” The following issues have been identified through scoping and previous environmental assessments and provide the basis for analysis of impacts in this EA:

- **Topography, Geology and Soils:** How will excavation and grading during parking lot, access road and trail construction impact geologic and soil resources and the success of revegetation following construction?
- **Vegetation:** How much native vegetation would be lost or disturbed for the proposed parking lot, access road and trail development? How much land will be restored if the current parking lots are closed?

- **Wetlands:** Will construction activities or use of the facilities have any impact on wetlands?
- **Wildlife:** How will elk, mule deer, birds and other wildlife be impacted by the proposed trailhead relocation and development activities? Will the proposed realignment of the Black Canyon Trail have any impact on nesting falcons and goshawks?
- **Threatened, Endangered, and Sensitive Species:** Are there threatened, endangered or sensitive plant or animal species within the area that may be impacted?
- **Air Quality:** Will construction activities or use of the facilities have any detrimental effect on air quality?
- **Natural Soundscapes:** How much noise and disturbance is expected during construction. Will there be impacts to natural soundscapes?
- **Lightscape Management:** Will there be increased lighting that would impact the night sky?
- **Wilderness:** Will there be any impacts to wilderness areas with the construction of a new access road, parking lot and trails? Will the facilities have any effect on future wilderness designation?
- **Cultural Resources:** Will any archeology features or other cultural resources be impacted with the construction of a new access road, parking lot and trails?
- **Visitor Use:** What impact will the parking lot relocation have on rock climbers, commercial liveries, private horse users and other users?
- **Park Operations:** How will the parking lot relocation affect emergency response?
- **Visual Resources:** How will the scenic quality of the area change with the proposed improvements. What provisions are being made to protect the scenery?
- **Local and Regional Economy:** How will local businesses be affected by the proposed trailhead relocation?
- **Nearby landowners:** What effect will the trailhead and parking lot relocation have on nearby landowners?

Impact Topics

Impact Topics Selected for Detailed Analysis

Impact topics address the resources of concern that could be affected by the range of alternatives for this project. The impact topics discussed in this EA were selected based on the issues identified above. The impact topics that were selected for detailed analysis include topography, geology, soils and vegetation, wetlands, natural soundscapes, lightscape management, threatened, endangered and rare species, wildlife, wilderness, air quality, cultural resources, local and regional economy, visitor use, nearby landowners and visual resources.

Impact Topics Dismissed from Further Consideration

Floodplains: Executive Order 11988 (Floodplain Management) requires an examination of the impacts and potential risk involved in placing facilities within floodplains. There is an exception to this executive order for “entrance, access, and internal roads to or within existing units of the system...” in the Federal

Register dated 5/28/80; Vol. 45, No. 104. Section 5, B2c, page 35918. The proposed and existing parking lots and access roads are not or will not be placed in a floodplain and will not be discussed in detail in this EA.

Water Quality: The 1972 Federal Water pollution Control Act, as amended by the Clean Water Act of 1977, establishes a national policy to restore and maintain the chemical, physical, and biological integrity of the Nation's waters; to enhance the quality of water resources; and to prevent, control, and abate water pollution. The NPS *Management Policies* provides direction for the preservation, use, and quality of water originating, flowing through, or adjacent to park boundaries. The NPS seeks to restore, maintain, and enhance the quality of all surface and ground waters within the parks consistent with the 1972 Federal Water Pollution Control Act, as amended, and other applicable federal, state, and local laws and regulations.

The existing parking lots and the parking lots proposed in Alternatives 1, 2, or 3 are not located in or adjacent to a wetland or perennial stream and there will be no water quality impacts. The access road and two alternative parking lots as proposed in Alternative 4 are located in the vicinity of Black Canyon Creek. If Alternative 4A is selected a new crossing would have to be constructed over Black Canyon Creek in order to provide access to the parking lot located on the north side of the creek. During and immediately following construction, water quality could be affected in Black Canyon Creek. This potential impact is addressed in more detail in Section 4.3 Wetlands found on page 70. Therefore, water quality will not be discussed in detail in this EA.

There is a very small intermittent drainage in the area of the parking lot described in Alternative 1 that flows with water during rainstorm events and during the spring when snow is melting. Mitigation measures will be undertaken to protect the intermittent drainage and prevent water runoff from impacting nearby private land.

Storm Water Rules: The Storm Water Rule (40 CFR, Parts 122, 123, and 124) requires a National Pollution Discharge Elimination System (NPDES) permit on certain categories of storm water discharge. Road construction, such as clearing and grading activities that exceed five acres on an individual road project, would require a NPDES permit. Because the ground disturbance on all of the relocation alternatives is less than 5 acres, an NPDES permit will not be required.

Environmental Justice: Executive Order 12898, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations", requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. The proposed action would not have health or environmental effects on minorities or low-income populations or communities.

Prime Farmlands: In August, 1980, the Council on Environmental Quality (CEQ) directed that federal agencies must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resource Conservation Service as prime or unique. Prime or unique farmland is defined as soil, which particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. No prime or unique farmland is present in RMNP or in the locations that are being considered for the trailhead, parking lot or trails. The proposed land exchange would provide MacGregor Ranch with additional dryland pasture and an irrigated meadow that would enhance the ranch's ability to continue with the historic ranching operation. There would no impact on this resource for any of the alternatives.

Hazardous Material: There are no known hazardous materials or contaminated sites within the project area that would be affected by alternative actions. The potential introduction of hazardous substances during construction, such as fuel, hydraulic fluid, or other chemicals, would be closely regulated by best management practices.

Energy Requirements and Conservation Potential: RMNP incorporates the principles of sustainable design and development into new park facilities. Sustainability can be described as the result achieved by doing things in ways that do not compromise the environment or its capacity to provide for present and future generations. Sustainable practices minimize the short- and long-term environmental impacts of developments and other activities through resource conservation, recycling, waste minimization, and the use of energy efficient and ecologically responsible materials and techniques.

The National Park Service's *Guiding Principles of Sustainable Design* (1993) provide a basis for achieving sustainability in facility planning and design, emphasizes the importance of bio-diversity, and encourages responsible decisions. The guidebook describes principles to be used in the design and management of visitor facilities that emphasize environmental sensitivity in construction, use of nontoxic materials, resource conservation, recycling, and integration of visitors with natural and cultural settings. New facilities are designed to reduce energy costs, eliminate waste, and conserve energy resources by using energy efficient and cost-effective technology. Energy efficiency would also be incorporated into any decision-making process during the design, as well as all decisions affecting associated park operations. In addition, RMNP encourages suppliers, permittees, and contractors to follow sustainable practices and address sustainable park practices.

Compliance with Federal and State Regulations

The NPS will comply with all applicable federal, state, and local regulations when implementing an alternative. In addition, the park service will comply with all applicable National Park Service guidelines, provisions, acts, and regulations for the management of

Park resources. Regulatory requirements for this project are expected to include the following permits and approvals:

Rocky Mountain National Park Act of 1915

Congress established RMNP on January 26, 1915. The park's enabling legislation states, "...said area is dedicated and set apart as a public park for the benefit and enjoyment of people of the United States...with regulations being primarily aimed at the freest use of the said park for recreation purposes by the public and for the preservation of the natural conditions and scenic beauties..." (38 Stat. 798). The significance of RMNP lies in displaying, preserving and making available for public use and enjoyment, some of the finest examples of the spectacular physiographic, biologic, and scenic features typifying the southern Rocky Mountains. These natural and historic resources are even more significant because of their proximity to Colorado's Front Range metropolitan areas. Resolving visual impacts to the park and MacGregor Ranch, and cultural impacts to the historic character of the ranch is consistent with the park's enabling legislation.

The National Park Service Organic Act of 1916

Congress formally established the National Park Service by the Act of August 25, 1916, commonly called the Organic Act, which reads: "...to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." (16 U.S.C. 1 et seq.)

The mandate of the NPS is to preserve the natural, scenic and cultural resources in a manner that leaves them unimpaired for future generations. This is a fundamental purpose of RMNP and all other national parks, monuments and reservations. Resolving the parking problem and its impact on MacGregor Ranch is consistent with the NPS Organic Act.

The Endangered Species Act

The Endangered Species Act requires the NPS to determine whether a proposed action would affect federally listed threatened or endangered species. It is well within the spirit of the act that the NPS also protects candidate species to prevent listing of a particular species in the future. It also recommends the NPS consider all state-listed threatened, endangered, rare, and sensitive species in decisions involving natural resources.

The purposes of an EA is "to provide a means whereby the ecosystems upon which endangered, and threatened species depend may be conserved, and to provide a program for the conservation of endangered, and threatened species ..."

Wilderness Act of 1964

The 1964 Wilderness Act established a National Wilderness Preservation System composed of designated federally owned areas. The Act requires that federal agencies administer these areas for the use and enjoyment of the American people

in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and provide for their protection and preservation of their wilderness character. The Act concurs with and generally reinforces the resource protection mandate of the NPS Organic Act.

The Redwood Act of 1978

In 1978, Congress made clear that the NPS should carefully consider any unnatural impact to natural resources, except where directed to do so by Congress. The Redwood Act of 1978 states, “The authorization of activities be construed and the protection, management, and administration of these areas be conducted in light of the high public value and integrity of the National Park System and not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress.” The Redwood Act mandates that the NPS manage its lands, waters and other resources to preclude or ameliorate human activities, which may result in damage to or degradation of natural system structure, integrity or function, unless otherwise directed by Congress.

National Environmental Policy Act (NEPA)

NEPA is far-reaching. Whenever the NPS considers an action that could have impacts on the human environment, NEPA is triggered. This is true whether the NPS generates the action or the applicant is a private individual or another federal, state, or local agency. While NEPA is only triggered when there is a physical impact on the environment, the Council on Environmental Quality (CEQ) regulations require analysis of social and economic effects in EAs.

Federal actions are defined as projects, activities, or programs funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; those requiring a federal permit, license, or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a federal agency. If such actions have the potential to cause environmental impact, whether adverse or beneficial, the NEPA process must be completed before a decision is made.

Federal Water Pollution Control Act and Executive Order 11990 (Protection of Wetlands)

There is one Federal Act and one Executive Order protecting water, including wetlands – the Federal Water Pollution Control Act (Clean Water Act), and Executive Order 11990 (Protection of Wetlands). The 1972 Clean Water Act, Section 404, provides indirect wetlands protection through a suite of nationwide water quality protection provisos designed to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” In 1977, Executive Order 11990, “Protection of Wetlands,” ordered Federal agencies to “...avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practical alternative ...”

National Historic Preservation Act (1966, as amended in 1992)

The National Historic Preservation Act (NHPA) (16 U.S.C. 470 *et seq.*) created the Advisory Council on Historic Preservation (ACHP), an independent Federal agency, to advise the President and Congress on matters involving historic preservation. The ACHP is authorized to review and comment on all actions licensed by the Federal government which will have an effect on properties listed on the National Register of Historic Places, or eligible for such listing.

Specifically, §106 of the Act requires that a Federal agency involved in a proposed project or activity is responsible for initiating and completing the review process. The agency must confer with the State Historic Preservation Officer (an official appointed in each State or territory to administer the National Historic Program) and the NHPA.

Executive Order 11990 (Protection of Wetlands)

The Executive Order requires Federal agencies to minimize the loss, destruction or degradation of wetlands and to enhance their natural and beneficial values. The NPS *Management Policies*; NPS-2 (*Planning Process Guidelines*), 1982; and DO-12 (*Conservation Planning Environmental Impact Analysis, and Decision-Making*), 2001, provide direction for developments proposed in floodplains and wetlands.

Decision Process

An EA analyzes the proposed action and alternatives and their impacts on the environment, cultural resources, and socioeconomics. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and regulations of the Council on Environmental Quality (40 CFR 1508.9). The EA will be released to the public for a 30-day (minimum) comment period. The National Park Service will determine whether the environmental consequences of the proposed action requires preparation of an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

This EA evaluates four alternatives for relocating the Twin Owls and Gem Lake Trailhead parking lots, a proposed land exchange between the park and MacGregor Ranch, the proposed realignment of the Black Canyon Trail, construction of a new connecting trail, fence construction and the potential impacts that could result from implementing each of the alternatives. Chapter 2 describes the Alternatives under consideration including the preferred alternative, alternatives excluded from further consideration, and includes a summary table comparing the impacts of each alternative. Chapter 3 discusses the *Affected Environment*, and Chapter 4 includes an analysis of the *Environmental Consequences* for each of the alternatives.

CHAPTER 2

PROPOSED ACTION AND ALTERNATIVES

Introduction: During several years of on-going discussions, a full range of alternatives for meeting the project purpose and need were developed by input from RMNP staff, the MacGregor Ranch, nearby landowners and the general public. These alternatives were considered in two previous EAs. Several of these alternatives have been excluded from further consideration because they fail to address all of the issues and concerns that were identified during the public review process. With the exception of the No Action alternative, all of the alternatives considered in this EA include a land exchange between RMNP and the MacGregor Ranch. The land exchange has not been previously considered. Criteria used in the selection of reasonable alternatives include:

- The ability to relieve congestion and accommodate park visitors.
- The ability to provide for visitor enjoyment and safety.
- The potential for protecting natural and cultural resources and scenic values.
- The ability to resolve the conflict between the park, ranch and nearby private landowners.
- The ability to improve the efficiency of Park operations.

Four alternatives and a No Action alternative have been identified for detailed analysis. This chapter also includes a discussion of the environmentally preferred alternative and a summary comparison of the alternatives.

Alternative 1 – (Preferred Alternative) Consolidate the Twin Owls and Gem Lake trailheads at the east end of the MacGregor Ranch and construct a parking lot for 80 to 100 vehicles (Please refer to Figure 3).

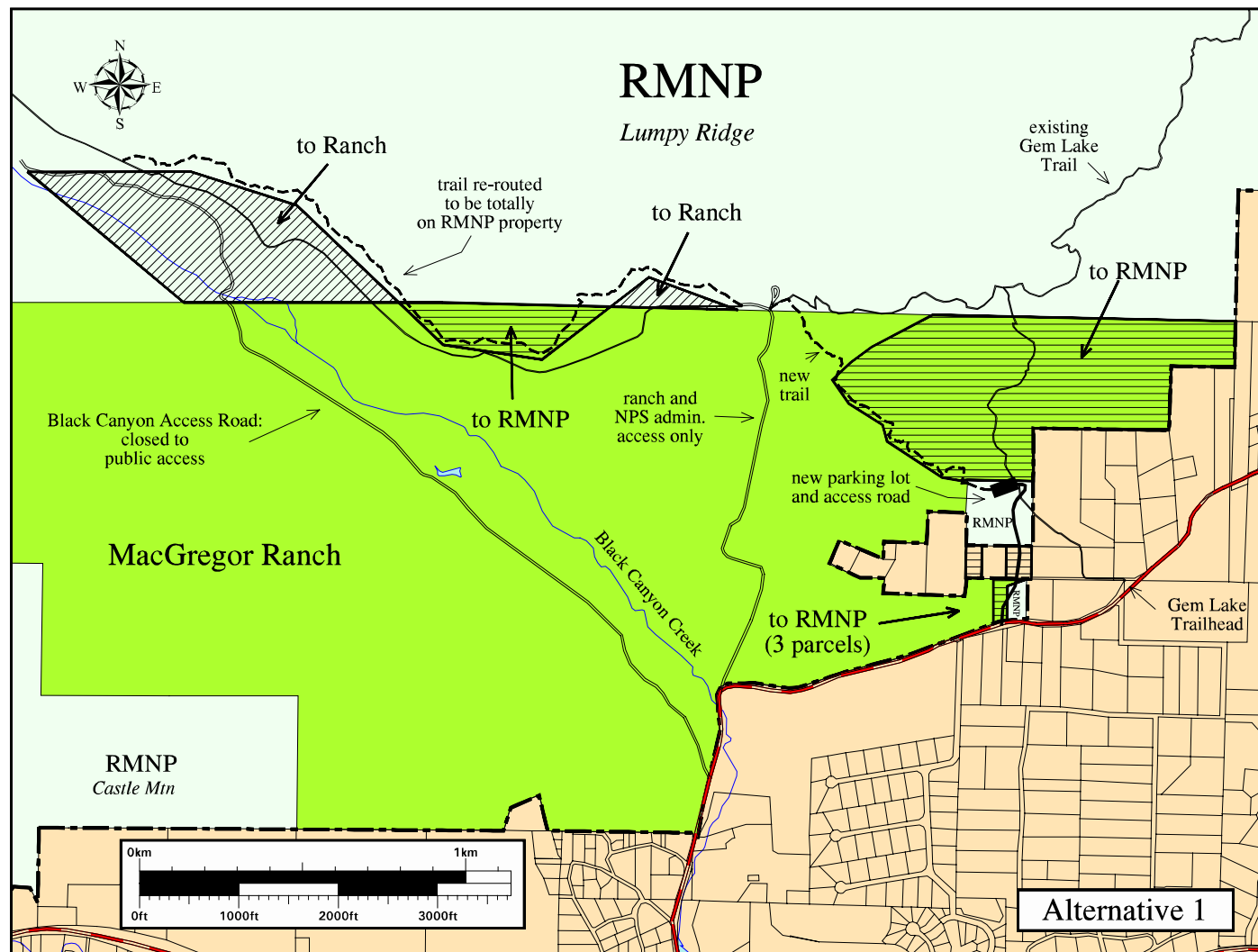
Estimated cost:

• Access road:	\$112,000
• Parking lot:	146,000
• Site facilities:	72,000
• Engineering & Project Supervision:	18,000
• Connecting trail	189,000
• Fencing (21,500 feet)	50,000
• Restoration of Gem Lake and Twin Owls parking lots	<u>10,000</u>
	\$597,000

The following actions would be accomplished if this alternative were implemented:

- A minor boundary revision and a land exchange between RMNP and the MacGregor Ranch would be completed using existing NPS authority (110 Stat. 4093). Please refer to the Proposed Land Exchange section on page 29 for a description of the areas proposed for exchange and their acreages.
- A conservation easement would be placed on all RMNP land that is transferred to the MacGregor Ranch. The purpose of the conservation easement would be to preserve the natural and cultural resources on the property.
- The Twin Owls and Gem Lake parking lots would be relocated to the east end of the ranch. A parking lot for 80 to 100 vehicles would be constructed at the north edge of a

Figure 3 - Alternative 1



GIS Program, Rocky Mountain National Park

10-acre parcel the park acquired from the ranch in 1983. A portion of the parking lot would be located on park property, and a portion would be located on the 100-acre parcel that RMNP would acquire from the MacGregor Ranch.

- Site facilities would include a vault toilet, trailhead bulletin board and fencing to discourage trespassing on adjacent private land.
- A 0.7-mile trail would be constructed to connect the new parking lot to existing trails in RMNP.
- A new 3-strand fence (two strands of barbed with a smooth strand on top) would be built between the MacGregor Ranch and the park to exclude cattle from the park.
- The current Twin Owls parking lot would be closed and restored to natural conditions. The existing water fountain would remain.
- The access road to the Twin Owls parking lot would be closed to the general public. The NPS would retain access and some parking for emergency operations and for the seasonal residence at Twin Owls.
- The Gem Lake parking lot and the first portion of the Gem Lake Trail if closed would be restored to natural conditions with landowner permission.

Advantages

- The proposed land exchange provides contiguous land north of the 10.04 acres currently owned by the NPS. As a result, the parking lot can be located further north than proposed in previous EAs and would not be visible to adjacent landowners. Impacts to nearby landowners can therefore be reduced.
- Removes vehicular and pedestrian traffic from the MacGregor Ranch museum area.
- The Gem Lake and Twin Owls parking lots can be consolidated in one location.
- The existing Twin Owls and Gem Lake parking lots can be closed and restored to natural conditions.
- The distance to Gem Lake is shortened by approximately 0.3 mile.
- The NPS will own the parking lot property.
- Eliminates impacts to property owners who are adjacent to the existing Gem Lake Trailhead, parking area, and first 0.3-mile of the Gem Lake Trail.
- Trespassing on MacGregor Ranch property can be avoided.
- New “bouldering” and climbing areas would become available for climbers.
- Improved access to Black Canyon Trail for commercial liveries (for example, Silver Lane Stables).

Disadvantages

- Visual, noise and trespassing concern for nearby landowners.
- Approximately 0.7 mile of new trail construction required.
- Added time and distance (approximately 0.7 mile) to the Black Canyon Trail, and to climbers accessing the Twin Owls rock formation and named rock formations west of Twin Owls.
- Located in an area that is presently not impacted by vehicular traffic.

Alternative 2 -- Consolidate the Twin Owls and Gem Lake trailheads on the north side of Devils Gulch Road approximately 1500 feet east of the entrance to the MacGregor Ranch and construct a parking lot for 80 to 100 vehicles (Please refer to Figure 4).

Estimated cost:

• Access road:	\$35,000
• Parking lot:	138,000
• Site facilities:	68,000
• Engineering & Project Supervision:	16,000
• Connecting trail	194,000
• Fencing (19,000 feet)	44,000
• Restoration of Gem Lake and Twin Owls parking lots	<u>10,000</u>
	\$505,000

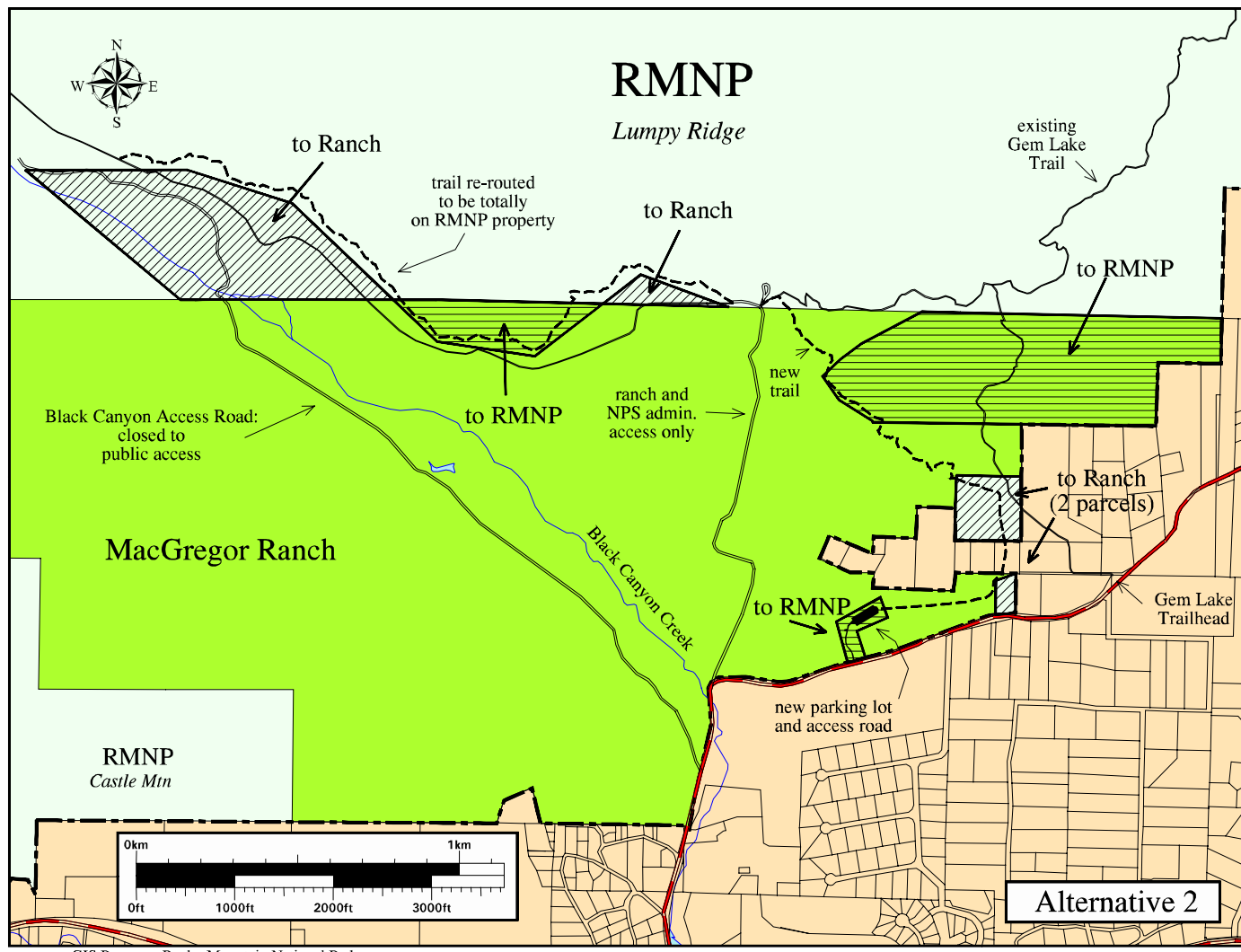
The following actions would be accomplished if this alternative were implemented:

- A minor boundary revision and a land exchange between RMNP and the MacGregor Ranch would be completed using existing NPS authority (110 Stat. 4093). Please refer to the Proposed Land Exchange section on page 29 for a description of the areas proposed for exchange and their acreages.
- A conservation easement would be placed on all RMNP land that is transferred to the MacGregor Ranch with the exception of the 10.04 and 1.48-acre parcels located at the east end of the Ranch. The purpose of the conservation easement would be to preserve the natural and cultural resources on the property.
- A new parking lot for 80 to 100 vehicles would be developed approximately 1,500 feet east of the main entrance to MacGregor Ranch.
- Site facilities would include a vault toilet, trailhead bulletin board and fencing to discourage trespassing on adjacent private land.
- A 1.2-mile trail would be constructed that would go east and then north to connect the new parking lot to existing trails in RMNP.
- The current Twin Owls parking lot would be closed and restored to natural conditions. The existing water fountain would remain.
- The access road to the Twin Owls parking lot would be closed to the general public. The NPS would retain access and some parking for emergency operations and for the seasonal residence at Twin Owls.
- A new 3-strand fence (two strands of barbed with a smooth strand on top) would be built between the MacGregor Ranch and the park to exclude cattle from the park.
- The Gem Lake parking lot and the first portion of the Gem Lake Trail if closed would be restored to natural conditions with landowner permission.

Advantages

- Removes vehicular and pedestrian traffic from the MacGregor Ranch museum area.
- The Gem Lake and Twin Owls parking lots can be consolidated in one location.
- The existing Twin Owls and Gem Lake parking lots can be closed and restored to natural conditions.
- The distance to Gem Lake remains almost the same as from the current parking lot.
- The NPS will own the parking lot property.

Figure 4 - Alternative 2



GIS Program, Rocky Mountain National Park

- Eliminates impacts to property owners who are adjacent to the existing Gem Lake Trailhead, parking area, and first 0.3-mile of the Gem Lake Trail.
- New “bouldering” and climbing areas would become available for climbers.
- Access road to the parking lot does not impact adjacent landowners except for the MacGregor Ranch.
- Improved access to Black Canyon Trail for commercial liveries (for example, Silver Lane Stables).

Disadvantages

- Visual, noise and trespassing concern for nearby landowners.
- Visual, noise and trespassing concern for the MacGregor Ranch.
- Visual impacts to passersby on Devils Gulch Road.
- Visual impacts to neighboring landowners to the south.
- Added time and distance (approximately 1.2 mile) to the Black Canyon Trail, and to climbers accessing the Twin Owls rock formation and named rock formations west of Twin Owls.
- Added time and distance will likely result in visitors establishing shortcuts through the MacGregor Ranch.
- New trail construction is 0.5-mile longer than that required for Alternative 1.
- Private landowners near the trail will experience noise, sight and possible trespass impacts from hikers and horseback riders.

Alternative 3 -- Consolidate the Twin Owls and Gem Lake trailheads on the north side of Devils Gulch Road at the entrance to the MacGregor Ranch and construct a parking lot for 80 to 100 vehicles (Please refer to Figure 5).

Estimated cost:

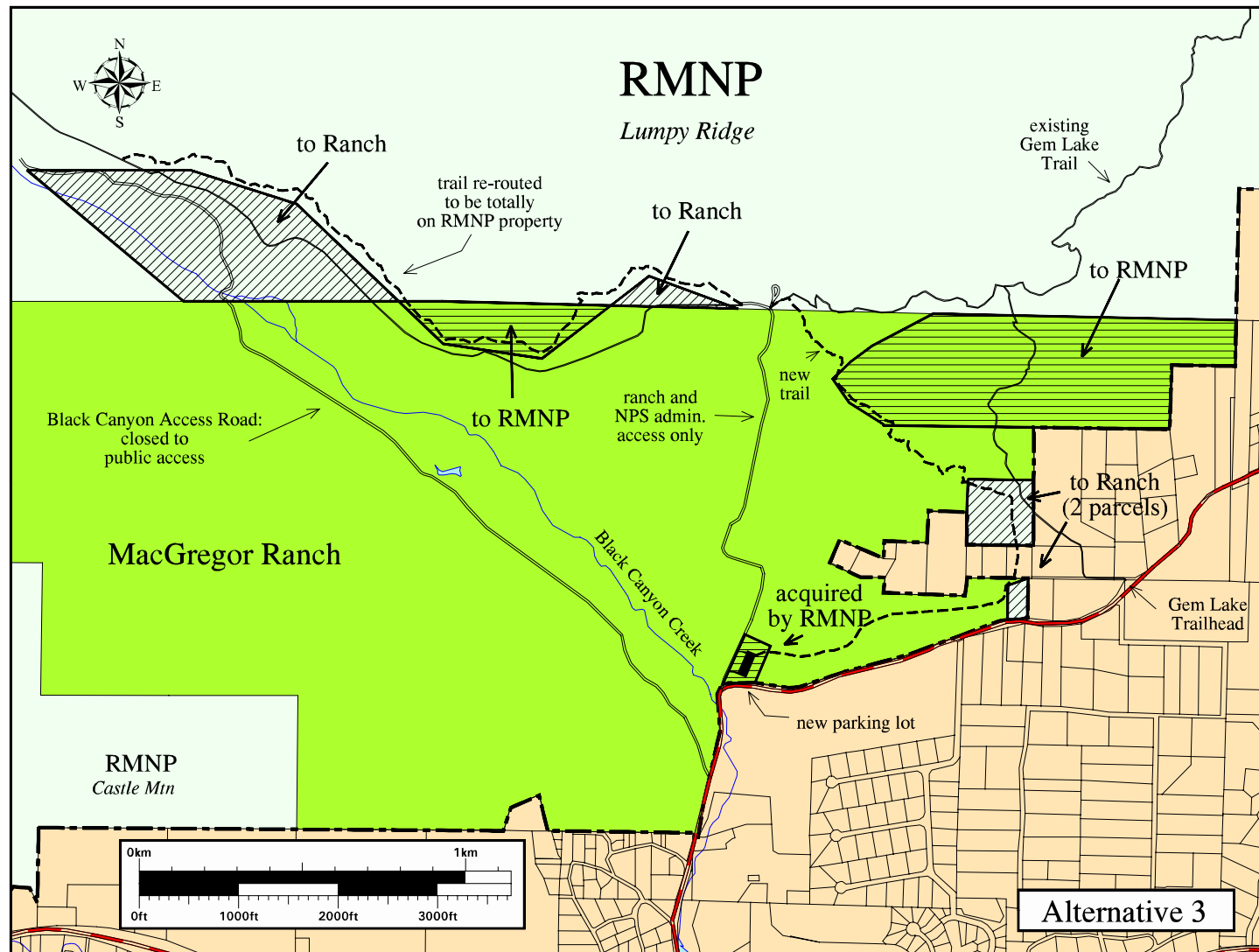
• Access road:	\$12,000
• Parking lot:	136,000
• Site facilities:	68,000
• Engineering & Project Supervision:	16,000
• Connecting trail	196,000
• Fencing (19,000 feet)	44,000
• Restoration of Twin Owls parking lot	<u>8,560</u>
	\$480,560

Except for the location of the parking lot and the extent of new trail development, this alternative is identical to Alternative 2, including the acreage to be exchanged between RMNP and the MacGregor Ranch.

Advantages

- Removes vehicular and pedestrian traffic from the MacGregor Ranch museum area.
- The existing Twin Owls parking lot can be closed and restored to natural conditions.
- The NPS will own the parking lot property.
- New “bouldering” and climbing areas would become available for climbers.
- Access road to the parking lot does not impact adjacent landowners except for the MacGregor Ranch.

Figure 5 - Alternative 3



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- Located in an area that is presently impacted by vehicular traffic.
- Improved access to Black Canyon Trail for commercial liveries (for example, Silver Lane Stables).

Disadvantages

- The MacGregor Ranch Trustees are opposed to this alternative (please refer to Appendix 1). The Federal Government would have to exercise its powers of condemnation to acquire the property for the parking lot and the right-of-way for a connecting trail.
- Congressional review will be needed to proceed with the condemnation and land exchange. Obtaining approval for the condemnation is considered unlikely.
- Visual, noise and trespassing concern to the MacGregor Ranch.
- Visual impacts to passerby on Devils Gulch Road.
- Parking lot is visible to landowners that use the MacGregor Ranch road to access their homes.
- Added time and distance (1.5 miles) to the Black Canyon Trail located at the former Twin Owls parking lot.
- Added time and distance will likely result in visitors establishing shortcuts through the MacGregor Ranch, even though the Ranch is opposed to foot traffic through the Museum area.
- Added time and distance (0.6 mile) to Gem Lake. Because of the added distance, the existing Gem Lake parking lot will likely remain in place.
- New trail construction is 0.75-mile longer than that required for Alternative 1.
- Nearby landowners will experience noise, sight and possible trespass impacts from hikers and horseback riders.

Alternative 4 -- Relocate the Twin Owls trailhead one mile west of its present location and construct a parking lot for 80 to 100 vehicles (Please refer to Figure 6).

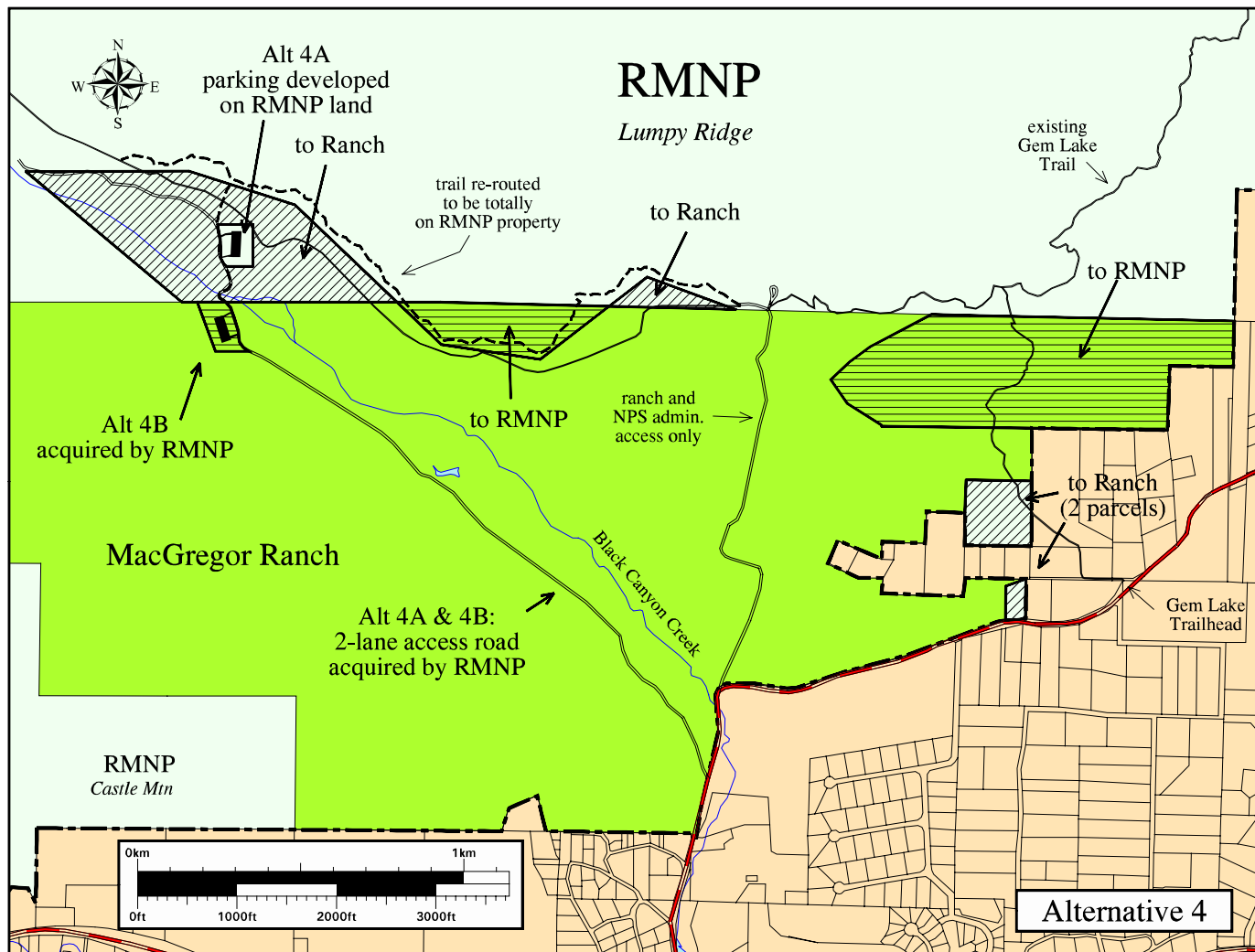
Estimated cost:

• Access road:	\$437,000
• Parking lot:	136,000
• Site facilities:	68,000
• Engineering & Project Supervision:	28,000
• Connecting trail	72,000
• Fencing (19,000 feet)	44,000
• Restoration of Twin Owls parking lot	<u>8,560</u>
	\$793,560

Alternative 4a - The proposed parking lot would be located north of Black Canyon Creek on land that is owned by the NPS

Alternative 4b – The proposed parking lot would be located south of Black Canyon Creek on land acquired from the MacGregor Ranch.

Figure 6 - Alternative 4



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The following actions would be accomplished if this alternative were implemented:

- Because the MacGregor Ranch Trustees are opposed to this alternative (please refer to Appendix 1), the Federal Government would have to exercise its powers of condemnation to acquire the property for the parking lot and the right-of-way for a connecting trail. Congressional review will be sought to proceed with condemnation and a land exchange.
- If condemnation is authorized, a boundary revision and a land exchange would be completed. Please refer to the Proposed Land Exchange section on page 29 for a description of the areas proposed for exchange and their acreages.
- A conservation easement would be placed on all RMNP land that is transferred to the MacGregor Ranch with the exception of the 10.04 and 1.48-acre parcels located at the east end of the Ranch. The purpose of the conservation easement would be to preserve the natural and cultural resources on the property.
- A new parking lot would be developed either north or south of Black Canyon Creek to accommodate 80 to 100 vehicles.
- Site facilities would include a vault toilet, trailhead bulletin board and fencing to discourage trespassing on adjacent private land.
- The 1.35-mile Black Canyon access road would be improved and paved to accommodate 2-way traffic.
- A 3-strand fence (two strands of barbed with a smooth strand on top) would be installed along both sides of the Black Canyon access road to protect ranch property.
- A 0.2 to 0.3-mile trail would be constructed to connect the parking lot the existing Black Canyon Trail in RMNP. A right-of-way would be required for portions of the trail that cross the MacGregor Ranch.
- The current Twin Owls parking lot would be closed and restored to natural conditions. The existing water fountain would remain.
- The access road to the Twin Owls parking lot would be closed to the general public. The NPS would retain access and some parking for emergency operations and for the seasonal residence at Twin Owls.
- A new 3-strand fence (two strands of barbed with a smooth strand on top) would be built between the MacGregor Ranch and the park to exclude cattle from the park.
- The existing Gem Lake trailhead and parking lot would remain in place.

Advantages

- Removes vehicular and pedestrian traffic from the MacGregor Ranch museum area.
- The existing Twin Owls parking lot can be closed and restored to natural conditions.
- The NPS will own the parking lot property.
- Parking lot does not impact adjacent landowners except for the MacGregor Ranch.
- Access road to the parking lot does not impact adjacent landowners except for the MacGregor Ranch.
- Improved climber access at the west end of Lumpy Ridge and on to Black Canyon for hikers.
- Only 0.2 to 0.3-mile of new trail construction will be required to connect the parking lot to existing trails within RMNP.

Disadvantages

- The MacGregor Ranch Trustees are opposed to this alternative (please refer to Appendix 1). The Federal Government would have to exercise its powers of condemnation to acquire an adequate right-of-way for the access road, and in the case of Alternative 4b, the property for the parking lot and a right-of-way for a connecting trail.
- Congressional review will be needed to proceed with the condemnation and land exchange. Obtaining approval for the condemnation is considered unlikely.
- Visual, noise and trespassing concern to the MacGregor Ranch.
- Adversely impacts the ranch operation and facilities used by the ranch for educational purposes.
- Parking lot would be built in a relatively undisturbed area and would be a visual intrusion for rock climbers and hikers who use the west end of Lumpy Ridge.
- Significant road construction and maintenance costs for the 1.35-mile access road.
- Snow removal will be difficult and costly.
- Potential for loss and fragmentation of wildlife habitat.
- Potential impacts to water quality in Black Canyon Creek and impacts to riparian habitat and wetlands in the vicinity of the creek particularly if Alternative 4A is selected.
- Added time and distance (1.25 mi.) to the east end of Lumpy Ridge. As a consequence, it is anticipated that additional demand will be placed on the existing Gem Lake parking lot.
- The existing Gem Lake parking lot and trail would remain in place.
- Located in an area that is presently not impacted by vehicular traffic
- No direct access to Black Canyon Trail for commercial liveries (for example, Silver Lane Stables). Horse trailers would be required to transport horses to the trailhead.

Alternative 5 – No Action. Retain the Twin Owls and Gem Lake trailheads and parking lots at their present location (please refer to Figure 2).

Current conditions would remain unchanged.

Advantages

- No additional construction cost to RMNP.
- The NPS will continue to own the parking lot property.
- Parking lot does not impact adjacent landowners except for the MacGregor Ranch.
- Access road to the parking lot does not impact adjacent landowners except for the MacGregor Ranch.
- No changes to climber and hiker access.

Disadvantages

- Issues regarding parking capacity, traffic congestion, no parking spaces for vehicles with trailers and inadequate turn around space go unresolved.
- The historic access through the MacGregor Ranch to the Twin Owls parking lot is only one lane wide. Concerns about emergency access and visitor safety due to the narrowness of the road go unresolved.

- The MacGregor Ranch Trustees are opposed to this alternative (please refer to Appendix 1).
- Continued impacts to the historic MacGregor Ranch, including visual intrusion, noise, light and vibration.
- Concerns about pedestrian safety go unresolved.
- Impacts to adjacent landowners associated with continued use of the Gem Lake trailhead will go unresolved.
- No direct access to Black Canyon Trail for commercial liveries (for example, Silver Lane Stables). Horse trailers would be required to transport horses to the trailhead.

Proposed Land Exchange

The current east-west boundary separating RMNP from the MacGregor Ranch is a straight line that does not respect the use of the land, topography or ecological process. RMNP and the MacGregor Ranch Trustees are interested in amending this boundary to more clearly define their respective interests. With the proposed land exchange, all suitable grazing land would be transferred to the MacGregor Ranch, and portions of the Ranch that are not suitable for grazing would be transferred to RMNP. The MacGregor Ranch would acquire the irrigated meadow and some additional acreage that contains two diversion dams on Black Canyon Creek plus two irrigation ditches. The diversion dams and irrigation ditches have belonged to the MacGregor Ranch for decades. The proposed land exchange is tied directly to the parking lot alternatives:

Alternative 1 (Please refer to Figure 3).

- MacGregor Ranch would transfer to RMNP:
 - Approximately 100 acres located in the northeast corner of the ranch.
 - Three parcels containing approximately 4 acres located at the east end of the ranch.
 - Approximately 11 acres located on the north side of the ranch.
- RMNP would transfer to the MacGregor Ranch:
 - Approximately 70 acres of dryland and irrigated pasture located just north of the MacGregor Ranch in the Black Canyon area. RMNP would retain a right-of-way for the Black Canyon Trail and the MacGregor Falls Trail.
 - Approximately 9 acres located west of the current Twin Owls trailhead and parking lot. RMNP would retain a right-of-way for the Black Canyon Trail.

Alternative 2 (Please refer to Figure 4).

- MacGregor Ranch would transfer to RMNP:
 - Approximately 84 acres located in the northeast corner of the ranch
 - Approximately 11 acres located on the north side of the ranch
 - Approximately 3.5 to 5 acres on the north side of Devils Gulch Road for the new parking lot
- RMNP would transfer to the MacGregor Ranch:
 - Approximately 70 acres of dryland and irrigated pasture located just north of the MacGregor Ranch in the Black Canyon area. RMNP would retain a right-of-way for the Black Canyon Trail and the MacGregor Falls Trail.
 - Approximately 9 acres located west of the current Twin Owls trailhead and parking lot. RMNP would retain a right-of-way for the Black Canyon Trail.

- The 10.04 and 1.48 acre parcels acquired from the MacGregor Ranch in 1983. RMNP would retain trail rights-of-way across the 10.04-acre parcel, but no other restrictions would be imposed upon these two parcels.

Alternative 3 (Please refer to Figure 5).

This alternative is identical to Alternative 2 except for the location of the parking lot. The MacGregor Ranch Trustees are opposed to this alternative (please refer to Appendix 1). If this alternative is selected, Congressional review will be sought to proceed with condemnation and a land exchange. If condemnation is authorized, a boundary revision and a land exchange would be completed.

Alternative 4 (Please refer to Figure 6).

The MacGregor Ranch Trustees are opposed to this alternative (please refer to Appendix 1). If this alternative is selected, Congressional review will be sought to proceed with condemnation and a land exchange. If condemnation is authorized, a boundary revision and a land exchange would be completed.

- MacGregor Ranch would transfer to RMNP:
 - Approximately 84 acres located in the northeast corner of the ranch
 - Approximately 11 acres located on the north side of the ranch
 - A right-of-way along the Black Canyon access road with sufficient width to accommodate 2-way traffic.
 - **Alternative 4b** – 3.5 to 5 acres on the south side of Black Canyon Creek for the new parking lot.
- RMNP would transfer to the MacGregor Ranch:
 - Approximately 9 acres located west of the current Twin Owls trailhead and parking lot. RMNP would retain a right-of-way for the Black Canyon Trail.
 - The 10.04 and 1.48 acre parcels acquired from the MacGregor Ranch in 1983. RMNP would retain a trail right-of-way across the 10.04-acre parcel, but no other restrictions would be imposed upon these two parcels.
 - **Alternative 4a** - Approximately 65 acres of dryland and irrigated pasture located just north of the MacGregor Ranch in the Black Canyon area. RMNP would retain a right-of-way for the Black Canyon Trail and the MacGregor Falls Trail.
 - **Alternative 4b** - Approximately 70 acres of dryland and irrigated pasture located just north of the MacGregor Ranch in the Black Canyon area. RMNP would retain a right-of-way for the Black Canyon Trail and the MacGregor Falls Trail.

Alternative 5 (No Action)

There would be no land exchange between RMNP and the MacGregor Ranch if Alternative 5 is selected.

For Alternatives 1 through 4, a conservation easement would be placed on all RMNP land that is transferred to the MacGregor Ranch with the exception of the 10.04 and 1.48-acre parcels located at the east end of the Ranch. The purpose of the conservation easement would be to preserve the natural and cultural resources on the property. The conservation easement would be similar to the existing conservation easement that covers 1,221 acres of the MacGregor Ranch.

The existing conservation easement, purchased in 1983, contains the following restrictions:

- No commercial, industrial or residential uses shall be made of the land except as needed for educational, ranching or museum purposes as prescribed by the MacGregor Ranch Trustees.
- No major public utility installations.
- No advertising signs or billboards.
- No searching for, gathering, digging or excavating for artifacts.
- No timbering activities.
- No excavation or topographic changes.

The land to be exchanged between RMNP and the MacGregor Ranch is intended to be of equal value based. The land value would be determined by an appraisal conducted by a licensed appraiser. If the appraisal reveals that the lands to be exchanged are not of equal value, the NPS would enter into negotiations with the MacGregor Ranch Trustees. If the MacGregor Ranch lands were of greater value, the NPS would use available funds to cover the additional cost. If the NPS lands were of greater value, the MacGregor Ranch would likely incorporate additional lands in the exchange.

With the land exchange proposed with Alternative 1, there would be a net gain of 102 acres that could become Recommended Wilderness. Approximately 65 acres (the irrigated and dryland pasture that would go to the MacGregor Ranch) would be removed from its current designation as Potential Wilderness Addition.

With the land exchange proposed with Alternatives 2, 3 and 4 there would be a net gain of 86 acres that could become Recommended Wilderness. Approximately 65 acres (the irrigated and dryland pasture that would go to the MacGregor Ranch) would be removed from its current designation as Potential Wilderness Addition.

Black Canyon Trail

Two alternatives are being considered for the Black Canyon Trail:

Alternative A – Keep the Current Black Canyon Trail Alignment (Status Quo)

In 1983 the NPS acquired a right-of-way for the Black Canyon Trail where it crosses the MacGregor Ranch. Under this alternative, the NPS would not change the existing Black Canyon Trail or the right-of-way it currently owns. RMNP could decide to maintain the current Black Canyon Trail alignment regardless of which Twin Owls/Gem Lake parking lot alternative is selected. If it is determined that a land exchange between RMNP and the MacGregor Ranch will be done, the NPS would retain rights-of-way for the Black Canyon Trail and the MacGregor Falls Trail where they cross land that is proposed to be transferred to the MacGregor Ranch.

Advantages

- The current trail is a high quality trail, built to a sustainable standard and is easily maintained.
- The current trail is located in favorable terrain and is not subject to short-cutting by hikers or climbers.

- Senior citizens like the current trail because of its favorable terrain.
- No additional construction expense will be incurred.

Disadvantages

- The Black Canyon Trail and the MacGregor Falls Trail would continue to cross the MacGregor Ranch. This does not achieve one of the stated purposes for this project, which is to clearly demarcate recreational activities and natural resources within RMNP from those of the MacGregor Ranch.

Alternative B – Realign the Black Canyon Trail

Estimated cost: \$237,000

In order to clearly separate the interests of RMNP from those of the MacGregor Ranch, a portion of the Black Canyon Trail would be moved to the north so that it is separated from the pastureland and located entirely within the proposed park boundary. A new trail alignment has been investigated that will avoid the pastureland (refer to Figure 6). The new alignment starts at the current Twin Owls parking lot and heads west for a distance of approximately 1.25 miles before rejoining the existing Black Canyon Trail. The Black Canyon Trail would not be realigned if Alternative 5 (No Action) is selected. If the Black Canyon Trail is realigned, a new trail connection to MacGregor Falls would be constructed.

Advantages:

- Locates the trail within the boundaries of RMNP and avoids MacGregor Ranch pastureland.
- Locates the trail closer to rock climbing routes.

Disadvantages:

- Significant cost to realign the trail. Maintenance cost is also expected to be higher because the new trail is not readily accessible by machinery.
- Potentially encourages off trail use (and new social trails) to rocks that can be used by climbers for “bouldering”.
- The route to MacGregor Falls is longer.
- The new alignment has more grade changes (up and down) than the current alignment and weaves its way among rock outcroppings. This may entice some hikers and rock climbers to create short cuts and would discourage senior citizens from using the trail.
- The new trail alignment places the trail closer to raptor nesting locations, which could impact the breeding and nesting success of these birds.

Because of the expense involved, if this alternative is selected it is anticipated that the trail realignment will be completed in phases over the course of several years. In the meantime, the existing Black Canyon Trail will remain in place within the existing right-of-way. The Black Canyon Trail crosses the irrigated meadow that the NPS proposes to transfer to the MacGregor Ranch. As part of the land exchange, the NPS would retain a right-of-way for the trail.

Alternatives Excluded from Further Consideration

Enlarge the Existing Parking Lots, Secure 2-lane Access, and Install Pedestrian Safety Devices at the MacGregor Ranch.

The park considered enlarging the existing Twin Owls parking lot, securing a right-of-way that would ensure permanent two-lane access, and the installation of speed bumps, speed limit signs and a pedestrian crossing at the MacGregor Ranch. Enlargement of the existing Gem Lake parking lot was also considered, but excluded from further consideration because the NPS has no jurisdiction over the Gem Lake parking lot. Enlarging the Twin Owls parking lot was also excluded from further consideration because it does not meet some of the primary purposes of this project, which are to:

- Protect the National Register status of the MacGregor Ranch;
- To preserve the ranch's scenic qualities and historic ambiance; and,
- Eliminate a safety concern that currently exists because the access road to the Twin Owls parking lot bisects an area of the MacGregor Ranch that is used by 5,000 school-aged children each year.

Also, the MacGregor Ranch is private property, and the historic access to the existing Twin Owls parking lot is only one-lane wide. Because the MacGregor Ranch opposes the acquisition of a wider right-of-way and the NPS has no jurisdiction over the Ranch, the Federal Government would be required to condemn the land. Obtaining approval for such an action is considered unlikely.

Construct a New Gem Lake Trailhead and Parking Lot for About 40 vehicles on NPS land.

This alternative proposes the construction of a 40-car parking lot on the 10.04 acres currently owned by the NPS. The existing Twin Owls parking lot would be retained at its present size, or enlarged, and the NPS would secure a two-lane right-of-way to the parking lot through the MacGregor Ranch. The new parking lot would provide overflow parking when the Twin Owls parking lot is full. The current Gem Lake parking lot would be closed and the area restored. This alternative was excluded from further consideration for the same reasons as listed above and the potential impacts to nearby landowners.

Limit Public Access to the Twin Owls Parking Lot to Reduce Impacts to the MacGregor Ranch.

The park considered several options to limit use of the Twin Owls parking lot so that the parking lot capacity is not exceeded, thereby limiting traffic through the MacGregor Ranch:

- Install an electronic message board at the entrance to the MacGregor Ranch. A Park ranger would activate the message board to indicate when the Twin Owls parking lot is full.
- Install a fee collection station. The entrance station would be staffed at busy times, and visitors would be turned away when the Twin Owls parking lot is full.
- Issue permits for use of the Twin Owls parking lot. The number of permits issued would not exceed the capacity of the parking lot.

These alternatives were excluded from further consideration because they would all require significant additional NPS staff time to implement and would not improve the

efficiency of park operations. In addition, they do not meet some of the primary purposes of this project, which are to:

- Protect the National Register status of the MacGregor Ranch;
- To preserve the ranch's scenic qualities and historic ambiance; and,
- Eliminate a safety concern that currently exists because the access road to the Twin Owls parking lot bisects an area of the MacGregor Ranch that is used by 5,000 school-aged children each year.

Provide Access to the Alternative 4 Parking Lot from Fall River Road

The park considered providing an access road to the Alternative 4 location from Fall River Road. The access road would join Fall River Road in the vicinity of the intersection of Fall River Road and Fish Hatchery Road. The access road would proceed to the east to the Alternative 4 parking lot site located at the west end of the MacGregor Ranch. This alternative was excluded from further consideration because the access road would cross two privately owned parcels of land. The land owners oppose the acquisition of a right-of-way, and a conservation easement has been placed on one of the parcels, which prohibits further development. In order to implement this alternative, the Federal Government would be required to condemn the land. Congressional approval for such an action is considered unlikely. The environmental impacts would likely be significant because the road corridor would impact a major elk migration corridor and important habitat for bighorn sheep. Construction costs for a new road would be significant.

Shuttle Service from Downtown Estes Park

The park considered instituting a shuttle service from downtown Estes Park to the Twin Owls parking lot, MacGregor Ranch, and Gem Lake parking lot during the peak visitor season. This alternative was excluded from further consideration for the following reasons:

- Visitor demand at the Twin Owls parking lot, Gem Lake Parking lot and at the MacGregor Ranch is not sufficient to justify the expense of a shuttle bus and driver.
- To be convenient for visitors, shuttle buses would have to operate frequently. Because of the low demand, shuttle buses would often run without passengers.
- On the days the shuttle is operating, the Twin Owls parking lot would be closed to private automobiles. This would inconvenience visitors, such as rock climbers, who would prefer to get an early start before the shuttle is operating. Also, visitors could be stranded at the trailhead if they arrive back there after the shuttle has stopped running for the day.

Environmentally Preferred Alternative

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969, which is guided by the Council of Environment Quality (CEQ). The CEQ provides direction that the environmentally preferable alternative is the alternative "that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural and natural resources." As expressed in NEPA's Section 101, "it is the continuing responsibility of the Federal government to:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- Assure for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- Preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.”

The environmentally preferred alternative for the relocation of the Twin Owls and Gem Lake parking areas is based on these national environmental policy goals. A discussion of how each alternative meets these goals follows:

Alternative 1

This alternative seeks to meet the environmental policy goals by acquiring additional public land for the protection of natural and scenic resources (net gain of approximately 37 acres), which will benefit future generations. The proposed land exchange will help to ensure the long-term viability of the MacGregor Ranch, which preserves important historic aspects of our national heritage. This alternative improves the safety of park visitors and MacGregor Ranch visitors, and provides adequate parking capacity for park visitors. Scenic resources are protected by locating the parking lot where it can be screened from view using existing rock outcroppings and by planting additional shrubs and trees for screening purposes. The entrance road will use existing topography and additional plantings to minimize off-site visual impacts. By eliminating the existing parking lot and access road, cultural resources at the MacGregor Ranch are protected. By eliminating the Gem Lake parking lot and connecting trail, natural resources and visual resources can be restored. Undesirable consequences can be avoided because the Federal Government does not have to exercise its powers of condemnation to implement this alternative. This alternative would result in both temporary and long-term disturbances to presently undisturbed natural resources and to nearby landowners. Some landowners would benefit from the closure and restoration of the Gem Lake parking lot and first 0.3-mile of the Gem Lake Trail. Alternative 1 would realize each of the provisions of the national environmental policy goals.

Alternative 2

This alternative seeks to meet the environmental policy goals by acquiring additional public land for the protection of natural and scenic resources (net gain of approximately 26 acres), which will benefit future generations. The proposed land exchange will help to ensure the long-term viability of the MacGregor Ranch, which preserves important historic aspects of our national heritage. This alternative improves the safety of park visitors and MacGregor Ranch visitors, and provides adequate parking capacity for park visitors. The access road will be shorter than that required for Alternative 1, which minimizes the impact of the road on natural and visual resources. By eliminating the existing parking lot and access road,

cultural resources at the MacGregor Ranch are protected. By eliminating the Gem Lake parking lot and connecting trail, natural resources and visual resources can be restored. Undesirable consequences can be avoided because the Federal Government does not have to exercise its powers of condemnation to implement this alternative. This alternative would result in both temporary and long-term disturbances to presently undisturbed natural resources and to nearby landowners. This alternative will have a larger visual impact than Alternative 1 because it will be built in an open meadow adjacent to Devils Gulch Road. Because the 10.04-acre and 1.48-acre parcels currently owned by the NPS will revert to the MacGregor Ranch and may be sold, there may be impacts to nearby landowners from residential development. Some landowners would benefit from the closure and restoration of the Gem Lake parking lot and first 0.3-mile of the Gem Lake Trail. Alternative 2 does not fully meet the provisions of the environmental policy goals.

Alternative 3

This alternative seeks to meet the environmental policy goals by acquiring additional public land for the protection of natural and scenic resources (net gain of approximately 26 acres), which will benefit future generations. The proposed land exchange will help to ensure the long-term viability of the MacGregor Ranch, which preserves important historic aspects of our national heritage. This alternative improves the safety of park visitors and MacGregor Ranch visitors, and provides adequate parking capacity for park visitors. No new access road is required for this alternative, which minimizes the impact of the road on natural and visual resources. By eliminating the existing parking lot and access road, cultural resources at the MacGregor Ranch are protected. The proposed parking lot would impact the MacGregor Ranch and several landowners that use the MacGregor Ranch road for access to their homes. The connecting trail would be located in the vicinity of some year-round and seasonal homes. The Gem Lake parking lot and connecting trail cannot be eliminated, so there will continue to be impacts to natural and scenic resources. The Federal Government must exercise its power of condemnation to implement this alternative. This alternative would result in both temporary and long-term disturbances to presently undisturbed natural resources and to nearby landowners. This alternative will impact scenic resources at the main entrance to the MacGregor Ranch. Because the 10.04-acre and 1.48-acre parcels currently owned by the NPS will revert to the MacGregor Ranch and may be sold, there may be impacts to nearby landowners from residential development. Alternative 3 does not fully meet the provisions of the environmental policy goals.

Alternative 4

This alternative seeks to meet the environmental policy goals by acquiring additional public land for the protection of natural and scenic resources (net gain of approximately 21 to 26 acres), which will benefit future generations. The proposed land exchange will help to ensure the long-term viability of the MacGregor Ranch, which preserves important historic aspects of our national heritage. This alternative improves the safety of park visitors and MacGregor Ranch visitors, and provides adequate parking capacity for park visitors. A 1.35-mile, two-lane access road is required for this alternative, which will impact natural and visual resources. By eliminating the existing parking lot and access road, cultural resources at the MacGregor Ranch are protected. However, the access road will create other impacts to ranch operations and educational facilities. This alternative will not impact adjacent landowners except for the MacGregor Ranch. The Federal Government must

exercise its power of condemnation to implement this alternative. This alternative would result in both temporary and long-term disturbances to presently undisturbed natural resources. Because the 10.04-acre and 1.48-acre parcels currently owned by the NPS will revert to the MacGregor Ranch and may be sold, there may be impacts to nearby landowners from residential development. Alternative 4 does not fully meet the provisions of the environmental policy goals.

Alternative 5

This alternative does nothing to improve the safety of park and MacGregor Ranch visitors, it does not provide adequate parking capacity for park visitors, or address traffic congestion, lack of parking for vehicles pulling trailers, or the lack of turn around space for vehicles. This alternative does protect natural resources because there would be no new construction. There would continue to be adverse impacts to cultural resources at the MacGregor Ranch. This alternative does not impact adjacent landowners except for the MacGregor Ranch. The Gem Lake parking lot and connecting trail cannot be eliminated, so there will continue to be impacts to natural and scenic resources. Alternative 5 does not fully meet the provisions of the environmental policy goals.

Summary

Table 1 provides a summary comparing the methods each alternative uses to meet project objectives. Table 2 provides a summary comparing the potential effects of each alternative. Chapter 4 —*Environmental Consequences* provides an additional description of the impact of these actions for each resource.

Table 1 – Methods Each Alternative Uses to Meet Project Objectives

Objective	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Protect Cultural & Natural Resources	<ul style="list-style-type: none"> + Land exchange consolidates RMNP and Ranch interests. Natural resources are protected within the park and cultural resources are enhanced within the Ranch. + Removes the parking lot and access road from the core of the MacGregor Ranch which enhances cultural resources. 	<ul style="list-style-type: none"> + Land exchange consolidates RMNP and Ranch interests. Natural resources are protected within the park and cultural resources are enhanced within the Ranch. + Removes the parking lot and access road from the core of the MacGregor Ranch which enhances cultural resources. – Additional ranch acreage must be acquired for a new parking lot and access road. 	<ul style="list-style-type: none"> + Land exchange consolidates RMNP and Ranch interests. Natural resources are protected within the park and cultural resources are enhanced within the Ranch. + Removes the parking lot and access road from the core of the MacGregor Ranch which enhances cultural resources. – Additional ranch acreage must be acquired for a new parking lot and access road. 	<ul style="list-style-type: none"> + Land exchange consolidates RMNP and Ranch interests. Natural resources are protected within the park and cultural resources are enhanced within the Ranch. + Removes the parking lot and access road from the core of the MacGregor Ranch which enhances cultural resources. – Additional ranch acreage must be acquired for a new parking lot and access road. – Access road cuts through MacGregor Ranch pastureland and other facilities. – Possible wetland impacts associated with Alt. 4A. 	<ul style="list-style-type: none"> + Does not create any new disturbance to natural resources. – No land exchange is accomplished, so no additional natural or cultural resource protection would occur. – Does not protect the core of the MacGregor Ranch so cultural resources continue to be impacted. – Does not clearly delineate MacGregor Ranch and RMNP land for management purposes.

Objective	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Provide for RMNP visitor enjoyment and safety	<ul style="list-style-type: none"> + Provides adequate parking for cars and vehicles towing trailers, and provides adequate turn around space for vehicles + Improved visitor safety and emergency response. + Access drive will safely handle two-way traffic. + New trail connection to RMNP. 	<ul style="list-style-type: none"> + Provides adequate parking for cars and vehicles towing trailers, and provides adequate turn around space for vehicles + Improved visitor safety and emergency response. + Access drive will safely handle two-way traffic. + New trail connection to RMNP. 	<ul style="list-style-type: none"> + Provides adequate parking for cars and vehicles towing trailers, and provides adequate turn around space for vehicles + Improved visitor safety and emergency response. + Access drive will safely handle two-way traffic. + New trail connection to RMNP. 	<ul style="list-style-type: none"> + Provides adequate parking for cars and vehicles towing trailers, and provides adequate turn around space for vehicles + Improved visitor safety. + Access drive will safely handle two-way traffic. + New trail connection to RMNP. – NPS would have to acquire additional right-of-way for the access road. – Emergency response time may be longer than for other alternatives because of longer access road. – Winter access could be hampered because of snow removal costs. 	<ul style="list-style-type: none"> – Issues regarding parking capacity, congestion, inadequate parking space for vehicles pulling trailers and inadequate turn around space for vehicles are not addressed. – Concern about visitor safety due to inadequate one-lane access is not addressed.

Objective	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Provide for MacGregor Ranch visitor enjoyment and safety	<ul style="list-style-type: none"> + Removes the parking lot and access road from the MacGregor Ranch homestead. + Integrity of the historic MacGregor Ranch homestead is preserved and safety of ranch visitors is enhanced. 	<ul style="list-style-type: none"> + Removes the parking lot and access road from the MacGregor Ranch homestead. + Integrity of the historic MacGregor Ranch homestead is preserved and safety of ranch visitors is enhanced. 	<ul style="list-style-type: none"> + Removes the parking lot and access road from the MacGregor Ranch homestead. + Integrity of the historic MacGregor Ranch homestead is preserved and safety of ranch visitors is enhanced. – The new parking lot and access road would impact main entrance to the MacGregor Ranch. 	<ul style="list-style-type: none"> + Removes the parking lot and access road from the MacGregor Ranch homestead. + Integrity of the MacGregor Ranch homestead is preserved and safety of ranch visitors is enhanced. – Portions of the MacGregor Ranch would be impacted by the new parking lot and access road 	<ul style="list-style-type: none"> – No new accommodation for MacGregor Ranch visitor enjoyment and safety. – Integrity of the MacGregor Ranch homestead continues to be compromised.

Objective	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Minimize impacts to nearby private landowners	<ul style="list-style-type: none"> + Parking lot moved further north than proposed in previous EAs. + Parking lot screened from view by existing rock outcroppings. + Additional visual screening provided with the planting of trees and shrubs + Gem Lake trailhead, parking lot, and portion of access trail can be removed. – Access road would be visible to several adjacent landowners. 	<ul style="list-style-type: none"> + Parking lot located in an area that is further removed from nearby landowners, except for the MacGregor Ranch. – Access trail would affect nearby landowners. 	<ul style="list-style-type: none"> – Parking lot located in an area that will impact the MacGregor Ranch and several landowners that use the MacGregor Ranch road for access to their homes. – Access trail may affect nearby landowners. – Existing Gem Lake parking lot and access trail may remain in place and may continue to impact adjacent landowners. 	<ul style="list-style-type: none"> + Parking lot located in an area that will not impact nearby landowners except for the MacGregor Ranch. – Existing Gem Lake parking lot and access trail will remain in place and will continue to impact adjacent landowners. 	<ul style="list-style-type: none"> + The current Twin Owls parking lot does not affect nearby landowners except for the MacGregor Ranch. – The existing Gem Lake parking lot and access trail will remain in place and will continue to impact adjacent landowners.

Objective	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Improve the efficiency of park operations	<ul style="list-style-type: none"> + Resolves a longstanding issue between the MacGregor Ranch and RMNP. + Two-lane access enhances emergency response. + Clearly delineates MacGregor Ranch and RMNP resources. – Additional cost to construct the parking lot, access road, connecting trail and Black Canyon Trail and fencing. 	<ul style="list-style-type: none"> + Resolves a longstanding issue between the MacGregor Ranch and RMNP. + Two-lane access enhances emergency response. + Easy law enforcement oversight of the parking lot from Devils Gulch Road. + Clearly delineates MacGregor Ranch and RMNP resources. – Additional cost to construct the parking lot, access road, connecting trail and Black Canyon Trail and fencing. 	<ul style="list-style-type: none"> + Two-lane access enhances emergency response. + Easy law enforcement oversight from Devils Gulch Road. – Potential for trespassing on MacGregor Ranch. + Clearly delineates MacGregor Ranch and RMNP resources. – Additional cost to construct the parking lot, access road, connecting trail and Black Canyon Trail and fencing. 	<ul style="list-style-type: none"> – Additional cost to construct the parking lot, connecting trail and Black Canyon Trail and fencing. – High cost to construct and maintain 1.35-mile access road. – Because of the length of road and added maintenance cost for snow removal, the access road and parking lot will likely be closed in winter. 	<ul style="list-style-type: none"> + No additional construction or maintenance costs. – No accommodation to improve the efficiency of park operations. – Longstanding issue between the MacGregor Ranch and RMNP will continue to go unresolved.

Table 2 - Summary Comparison of the Potential Effects of Each Alternative

Impact Topic	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Topography, Geology and Soils	<p>Minor impact. Minor alteration of topography and soils with construction of the parking lot, access road and trail. Net disturbed area = 2.25 acres. Existing topsoil will be salvaged and used to restore disturbed areas prior to revegetation.</p> <p>Minor impact to rock formations as bouldering is permitted in an area that was once part of the MacGregor Ranch.</p>	<p>Same as Alt. 1, although less disturbance to soil than Alternative 1. Net disturbed area = 1.35 acres.</p>	<p>Same as Alt. 1, although less disturbance to soil than Alternative 1. Net disturbed area = 1.5 acres.</p>	<p>Moderate impact. Moderate alteration of topography and soils for the 1.35 mile access road, parking lot and trail. Net disturbed area = 4.0 acres. Existing topsoil will be salvaged and used to restore disturbed areas prior to revegetation.</p>	<p>No impact. No alteration of topography, geology or soils. Current disturbed area = 0.65 acre.</p>

Impact Topic	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Vegetation	<p>Minor impact. New parking lot, access road and trail will remove about 2.90 acres of habitat. Reclamation of Gem Lake and Twin Owls parking lots will gain 0.65 acre. Net loss equals 2.25 acres.</p> <p>Minor impact Ground disturbance and horse and hiker use of trails can lead to the establishment of invasive exotic plants.</p>	<p>Same as Alt. 1 With the parking lot, access road and trail development about 2.0 acres of habitat will be lost and .65 acre reclaimed. Net loss equals 1.35 acres.</p>	<p>Same as Alt. 1 With the parking lot, access road and trail development about 1.9 acre of habitat will be lost and 0.4 acre reclaimed. Net loss equals 1.5 acre.</p>	<p>Same as Alt. 1 With the parking lot, access road and trail development about 4.4 acres of habitat will be lost and 0.4 acre reclaimed. Net loss equals 4.0 acres.</p>	<p>No impact. No change to existing vegetation or habitat loss. No vegetation would be protected through a land exchange.</p>
Wetlands	<p>No impact Wetlands will not be disturbed.</p>	<p>No impact Wetlands will not be disturbed.</p>	<p>No impact Wetlands will not be disturbed.</p>	<p>Moderate impact for Alternative 4A. To accommodate a 2-lane access road, a new crossing will be required over Black Canyon Creek with possible impacts to wetlands.</p>	<p>No impact There are no wetlands in the immediate vicinity of the current Twin Owls and Gem Lake trailheads.</p>

Impact Topic	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Wildlife	<p>Minor impact with some animals displaced due to construction. Net loss of 2.25 acres of ponderosa pine and grassland habitat.</p> <p>Moderate impact to nesting prairie falcons and Golden Eagles with realignment of the Black Canyon Trail</p>	<p>Same as Alt. 1 except that RMNP will receive less acreage as part of the land exchange. There would be a net loss of 1.35 acre of open meadow grassland habitat that is important elk winter range.</p>	<p>Same as Alt. 1 except that RMNP will receive less acreage as part of the land exchange. There will be a net loss of 1.5 acre of habitat.</p>	<p>Same as Alt. 1 except that RMNP will receive less acreage as part of the land exchange. There will be a net loss of about 4.0 acres of habitat.</p> <p>Moderate impact on one pair of nesting Golden Eagles due to the location of the Alternative 4A parking lot.</p>	<p>No impact.</p> <p>No additional impacts to wildlife. No additional habitat protected through a land exchange.</p>
Threatened, Endangered and Rare Species	<p>Minor benefit. to nesting Northern goshawks and potential peregrine falcon nesting habitat.</p>	<p>Same as Alt. 1</p>	<p>Same as Alt. 1</p>	<p>Minor impact to nesting Northern goshawks and peregrine falcon nesting habitat.</p>	<p>Minor impact to nesting Northern goshawks and peregrine falcon nesting habitat.</p>
Air Quality	<p>Negligible impact to park.</p> <p>Minor impact to landowners during construction.</p> <p>No impact to air quality in the long term.</p>	<p>Same as Alt. 1</p>	<p>Negligible impact to the Park.</p> <p>Negligible impact to landowners during construction.</p> <p>Minor impact to the MacGregor Ranch during construction.</p> <p>No impact to air quality in the long term.</p> <p>Negligible impact to nearby landowners from existing Gem Lake parking lot.</p>	<p>Negligible impact to the Park.</p> <p>No impact to landowners during construction.</p> <p>Minor impact to the MacGregor Ranch during construction.</p> <p>No impact to air quality in the long term.</p> <p>Negligible impact to nearby landowners from existing Gem Lake parking lot.</p>	<p>Negligible impact to the Park.</p> <p>No impact to nearby landowners from the existing Twin Owls parking lot.</p> <p>Negligible impact to the MacGregor Ranch.</p> <p>Negligible impact to nearby landowners from existing Gem Lake parking lot.</p>

Impact Topic	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Natural Soundscape	<p>Moderate benefit to MacGregor Ranch homestead.</p> <p>Moderate impact to private landowners near the new parking lot.</p> <p>Minor benefit to homeowners near the existing hiking trail if the Gem Lake parking area and first 1/3 mile of trail is closed.</p>	<p>Moderate benefit to MacGregor Ranch homestead.</p> <p>Minor to Moderate impacts to nearby private landowners depending on whether the two tracts that revert to the Ranch are sold and developed.</p> <p>Minor to moderate impacts from hikers passing near homes on the new trail.</p>	<p>Same as Alt. 2 except that the Gem Lake parking lot and trail will likely remain in place and is likely to continue to impact nearby landowners.</p>	<p>Same as Alt. 2 except that the Gem Lake parking lot and trail will remain in place and will continue to impact nearby landowners.</p> <p>Minor impacts to outlying areas of the MacGregor Ranch.</p> <p>Minor impacts to rock climbers in the vicinity of the proposed parking lot.</p>	<p>No added impact to nearby land-owners.</p> <p>Moderate impacts to MacGregor Ranch Visitors.</p>
Lightscape Management	<p>Minor benefit to MacGregor Ranch homestead.</p> <p>Minor to Moderate impact to private landowners near the access road from headlight glare.</p>	<p>Minor benefit to MacGregor Ranch homestead.</p> <p>Minor to Moderate impact to nearby private landowners depending on whether the two tracts that revert to the Ranch are sold and developed.</p>	<p>Same as Alt. 2 except that the Gem Lake parking lot and trail will likely remain in place and is likely to continue to create minor impacts to nearby landowners.</p>	<p>Same as Alt 2 except that the Gem Lake parking lot and trail will remain in place and will continue to create minor impacts to nearby landowners.</p> <p>Minor impact to outlying areas of the MacGregor Ranch.</p>	<p>No impact to nearby land-owners.</p> <p>Minor impacts to MacGregor Ranch.</p>

Impact Topic	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Wilderness	<p>No impact on designated wilderness.</p> <p>Minor benefit with more land added to recommended wilderness with the proposed land exchange.</p> <p>Minor impact to recommended wilderness with possible increase in visitor use due to an increase in parking capacity.</p> <p>Minor impact if the Black Canyon Trail is realigned</p>	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1	<p>Minor impact to recommended wilderness due to the existence of the current Twin Owls parking lot. With this alternative, no additional land would be added to recommended wilderness.</p>
Cultural Resources	<p>Moderate benefit to the MacGregor Ranch homestead.</p> <p>No impact to cultural resources from parking lot, access road, and trail construction.</p> <p>No impact on cultural resources from the proposed land exchange or Black Canyon Trail realignment.</p>	<p>Moderate benefit to the MacGregor Ranch homestead.</p> <p>Minor impact to the Ranch. The parking lot would be visible from the historic A. Q. MacGregor cabin.</p> <p>No impact on cultural resources from the proposed land exchange or Black Canyon Trail realignment.</p>	<p>Moderate benefit to the MacGregor Ranch homestead.</p> <p>Moderate impact to the Ranch with the parking lot located at the main entrance to the ranch.</p> <p>No impact on cultural resources from the proposed land exchange or Black Canyon Trail realignment.</p>	<p>Moderate benefit to the MacGregor Ranch homestead.</p> <p>Moderate impact to the Ranch with the access road traversing the ranch and the parking lot located in Ranch pastureland.</p> <p>No impact as a result of the proposed land exchange or Black Canyon Trail realignment.</p>	<p>Moderate impact to the MacGregor Ranch homestead.</p>

Impact Topic	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Visitor Use	<p>Moderate benefit for park visitors with ease of access, increased parking capacity, parking for vehicles with trailers, improved emergency access and new hiking and bouldering opportunities.</p> <p>Moderate benefit for commercial liveries because of improved access to the Black Canyon Trail.</p> <p>Minor impact for visitors (seniors) and rock climbers who do not want to walk an additional 0.7-mi. to the Twin Owls.</p> <p>Minor impact due to increased potential for horse/hiker conflicts because both user groups must share one trail to Gem Lake.</p> <p>Minor benefit to some hikers due to the shorter distance to Gem Lake.</p>	<p>Same as Alt. 1 except that the hike to Gem Lake will be the same distance as from the current trailhead.</p>	<p>Same as Alt. 1 except that there will be a Moderate impact for visitors (seniors) and rock climbers who do not want to walk an additional 1.5-mi. to the Twin Owls.</p> <p>Minor impact for hikers to Gem Lake. The hike will be 0.3 mile longer each way.</p>	<p>Moderate impact to park visitors if access road and parking lot are closed during the winter due to adverse weather conditions.</p> <p>Moderate impact to some visitors and rock climbers who do not want to walk 1.25 miles to Twin Owls.</p> <p>Moderate benefit to some climbers due to the proximity of parking to climbing routes at the west end of Lumpy Ridge.</p> <p>Minor Impact to visitor experience (visual and noise impact) for climbers in the vicinity of the proposed parking lot.</p> <p>Minor impact due to increased potential for horse/hiker conflicts because of enhanced opportunities for horse use.</p>	<p>Moderate impact for visitors who must use the narrow existing access route through the MacGregor Ranch.</p> <p>Minor impact to commercial liveries will continue because there is no direct access to the Black Canyon Trail</p> <p>Moderate impact to park visitors from inadequate parking capacity, lack of parking for vehicles with trailers, congestion, and inadequate emergency access.</p>

Impact Topic	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Park Operations	Moderate benefit to RMNP as relocation of the parking lot resolves a long-standing issue between the MacGregor Ranch and the park. Additional cost to construct the parking lot, access road, connecting trail, Black Canyon Trail and fencing.	Same as Alt. 1	MacGregor Ranch is opposed to this alternative, so it does not resolve the long-standing issue between the Ranch and RMNP. Additional cost to construct the parking lot, access road, connecting trail, Black Canyon Trail and fencing.	MacGregor Ranch is opposed to this alternative, so it does not resolve the long-standing issue between the Ranch and RMNP. Substantial cost to construct the parking lot, access road, connecting trail, Black Canyon Trail and fencing.	Does nothing to resolve the long-standing issue between the MacGregor Ranch and RMNP. No additional cost to the taxpayer.

Impact Topic	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Visual Resources	<p>No impact to nearby landowners from the parking lot.</p> <p>Moderate impact to nearby landowners from the new access road.</p> <p>Negligible impact to MacGregor Ranch.</p> <p>Minor benefit to scenic vistas within the park and the MacGregor Ranch with removal of the Twin Owls parking lot. Minor benefit to nearby landowners with the removal of the Gem Lake trailhead, parking lot and 1/3-mile access trail.</p>	<p>Moderate impact to nearby landowners from the new parking lot, access road, and possible development of the two tracts that revert to the MacGregor Ranch.</p> <p>Moderate impact to MacGregor Ranch since the parking area will be built in an open meadow.</p> <p>Moderate impact to passerby on Devils Gulch Road.</p> <p>Minor benefit to Park and Ranch scenic vistas with removal of the Twin Owls parking lot.</p> <p>Minor benefit to nearby landowners with the removal of the Gem Lake trailhead, parking lot and 1/3-mile access trail.</p>	<p>Moderate impact to nearby landowners that use the MacGregor Ranch road and would drive by the parking lot to access their homes.</p> <p>Minor to moderate impact to nearby landowners with possible development of the two tracts that revert to the Ranch.</p> <p>Moderate impact to Ranch with parking lot at the main entrance to the Ranch.</p> <p>Moderate impact to passerby on Devils Gulch Road.</p> <p>Minor benefit to scenic vistas within the park and from the Ranch with removal of the Twin Owls parking lot.</p> <p>Minor impact to nearby landowners if the Gem Lake parking lot and trail will remain in place.</p>	<p>No impact to nearby landowners from the parking lot or road.</p> <p>Minor to moderate impact to nearby landowners with possible development of the two tracts that revert to the Ranch.</p> <p>Moderate impact to Ranch with access road traversing the Ranch, the visibility of the parking lot, and proximity of the access road to the Ranch Foreman's house.</p> <p>Minor to moderate impact for rock climbers at the west end of Lumpy Ridge.</p> <p>Minor benefit to Park and Ranch scenic vistas with removal of the Twin Owls parking lot.</p> <p>Minor impact to nearby landowners since the Gem Lake parking lot and trail will remain in place</p>	<p>Moderate impact to the MacGregor Ranch and from some rock climbing formations in the vicinity of the Twin Owls.</p> <p>Minor to moderate impact to nearby landowners since the Gem Lake parking lot and trail will remain in place.</p>

Impact Topic	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Local and Regional Economy	Moderate impact to horseback and climbing concessionaires. No other impact noted. Minor benefit to local economy related to purchase of construction materials	Same as Alt. 1	Same as Alt. 1	Minor benefit to climbing concessionaires with the parking lot located closer to named rock formations at the west end of Lumpy Ridge. Minor benefit to local economy related to purchase of construction materials	No impact to local and regional economy.
Nearby Landowners (except the MacGregor Ranch)	Moderate benefit to landowners that adjoin newly protected public land that is part of the proposed land exchange. Minor impact to nearby landowners from the development of the parking lot. Moderate impact to nearby landowners from the development of the and access road. Minor benefit to nearby landowners with the possible closure of the Gem Lake parking lot and trail.	Moderate benefit to landowners that adjoin newly protected public land that is part of the proposed land exchange. Moderate impact to nearby private landowners depending on whether the two tracts that revert to the MacGregor Ranch are sold and developed. Minor benefit to nearby landowners with the possible closure of the Gem Lake parking lot and trail.	Moderate benefit to landowners that adjoin newly protected public land that is part of the proposed land exchange. Moderate impact to nearby landowners that must drive by the parking lot to access their homes. Minor to moderate impact to nearby private landowners depending on whether the two tracts that revert to the MacGregor Ranch are sold and developed.	Moderate benefit to landowners that adjoin newly protected public land that is part of the proposed land exchange. No impact to nearby landowners (there are no adjacent or nearby private landowners except for the MacGregor Ranch). Minor to moderate impact to nearby private landowners depending on whether the two tracts that revert to the MacGregor Ranch are sold and developed.	No impact to nearby landowners from the parking lot and access road except for the MacGregor Ranch.

CHAPTER 3

AFFECTED ENVIRONMENT

NATURAL RESOURCES

Topography, Geology and Soils

The existing Twin Owls and Gem Lake parking lots are located at the base of the south side of Lumpy Ridge. Elevation ranges from about 7,800 feet (2,377 meters) at the base of Lumpy Ridge to 10,068 feet (3,069 meters) at the west end of the ridge. The geology in the area is generally igneous, and metamorphic rock. Geologic information reveals that faulting is occurring under the base of Lumpy Ridge running north to south. Lumpy ridge is unglaciated, which explains the rough granite, crystalline cracks and rounded structures that make it a popular rock climbing area. The freeze-thaw cycle is the predominant erosive factor in the shaping of the rocks.

An Order 2 soil survey was completed in the lower elevation areas of the park and an Order 3 soil survey completed for the other areas of the park in 1998 (Natural Resources Conservation Service 1999). Most soil series in the park are classified in the cryic soil temperature regime. There is some field-measured data available that suggest soils at high elevations and under spruce-fir forest would meet the requirements of the isofrigid soil temperature class. Specific soil types exist, but types generally depicted include Cryochrepts, Cryoboralfs and Cryaquepts. The Cryochrept type is well drained with moderately rapid permeability and slow runoff. Cryochrepts are generally in the glacial till areas and are deep to very deep. They may have large stones and boulders on the surface as well as in the profile. The erosion hazard is slight to moderate. The Cryoboralfs are moderately well to well drained with moderate permeability and moderate runoff. The erosion hazard is slight. The Cryaquepts are poorly to very poorly drained, with slow to moderate permeability and slow runoff. They are found in the wetter, flatter areas. Erosion is slight except on steeper slopes. Soil compaction and minor erosion are occurring in and around the existing Twin Owls parking lot and along access trails to popular rock climbing areas and the trail to Gem Lake.

The revegetation potential of soils in the project area is good to moderate due to good fertility and water holding capacity of the sandy to coarse textured soils. The erosion potential for most soils is low to moderate and the potential for erosion increases with the steepness of the slope. The high percentage of rock in the soil helps to armor the soil and reduce erosion, but can hamper topsoil salvage and reapplication.

Vegetation

The five alternatives are within the upper montane zone. Open stands of ponderosa pine are present throughout the project site intermixed with mountain meadows that support a diversity of grass species, wildflowers and shrubs. Common understory in the ponderosa pine or in the open meadows are Antelope bitterbrush, mountain muhly, needle and thread grass, fringed sage, golden banner and black-eyed Susan. The mountain meadows provide popular grazing and resting areas for elk and mule deer and sites for visitors to view wildlife.

The existing parking lots and the proposed new parking lot in Alternative 1 are located in ponderosa pine (*Pinus ponderosa*) and douglas fir (*Pseudotsuga menziesii*), with an understory of grasses, forbs, and scattered antelope bitterbrush, (*Pursha tridentata*).

Alternatives 2, 3 and 4 are located in an open meadow with few ponderosa pine. The dominant grasses for Alternatives 2, 3 and 4 are mountain muhly (*Muhlenbergia montana*), and blue grama (*Bouteloua gracilis*).

Wetlands

There are no wetlands associated with the Alternatives 1, 2, 3, or 5. The two alternative parking lots and the access road associated with Alternative 4 are located in the vicinity of Black Canyon Creek, which is a perennial stream. Along the length of the stream there are several jurisdictional wetlands. The parking lot as proposed in Alternative 4A would be located on the north side of Black Canyon Creek. The access road to this parking lot would cross Black Canyon Creek.

Wildlife

Rocky Mountain National Park is home to a variety of wildlife and aquatic species. About 260 species of birds, 66 species of mammals, 11 species of fish, five species of amphibians, and one species of reptile are found in the Park. The distribution of species in the Park varies by season, elevation, and the variety of habitats present.

The parking lots discussed in the alternatives are located within the montane zone. The montane zone, from 7,800 feet to 9,000 feet in elevation, forms the primary winter range for mule deer, elk and some bighorn sheep. These species are observed in the area of the alternatives throughout the winter, but are usually absent during the summer months, when they move into the higher elevations of the park. Based on pellet groups observed in the area, the denser the forest the less food there is available and the less importance it has for elk and mule deer forage. Open meadows provide more food and are considered important winter range. Forested areas offer protection during storm events or shade during warm days. Elk and mule deer move between open meadows throughout the MacGregor Ranch and the two NPS parcels east of MacGregor Ranch. Bighorn sheep are known to use the habitat southwest of Twin Owls near the 70 acres of land identified for exchange. Other common mammals found in the area include black bear, Abert's squirrel, chickaree, coyote, bobcat, mountain lion, chipmunk, pack rat, golden-mantled ground squirrel and Wyoming ground squirrel. The density of Wyoming ground squirrels is high in the open meadows of the MacGregor Ranch and around Lumpy Ridge and is one of the most important prey species for a wide range of predators. Birds of prey such as the prairie falcon, golden eagle, Northern goshawk, and the red-tailed hawk that nest on or near Lumpy Ridge are commonly observed hunting for ground squirrels in these open meadows.

One breeding pair of prairie falcons occasionally nests on Twin Owls and named rock formations east and west of Twin Owls. The falcons tend to move around the Lumpy Ridge area and it is unknown where they may nest from one year to the next. There is also one pair of golden eagles, two to three pair of red-tailed hawks and one pair of peregrine falcons that nest in the Lumpy Ridge area, and they each have two to three alternative nest sites. These raptors may also be in different locations from one year to the next. Each spring park

employees and/or volunteers survey known breeding sites to determine which cliff or tree a raptor is using and appropriate temporary climbing closures are then established. Other known breeding birds of prey in and around Lumpy Ridge include the great-horned owl, pygmy owl, and sharp-shinned hawk. Based on survey work that has occurred throughout the park since 1988, Lumpy Ridge has the highest density of breeding birds of prey in the park. This high density of birds of prey is because of the low elevation of the ridge (less than 10,000 feet), abundance of rocky outcrops and cliffs with a southern exposure, abundance of ponderosa pine and aspen habitat with high densities of prey, including an abundance of Wyoming ground squirrels and meadow voles in adjacent open meadows.

The area is also well known for a high diversity and density of songbirds. The highest diversity and density of birds that breed in the park nest in aspen and ponderosa pine habitat. Ponderosa Pine is the dominant habitat on the slopes below Lumpy Ridge and douglas fir and lodgepole pine dominate the sides and top of the ridge. Open meadows and aspen are found on the more gentle terrain on the north, south and east sides of the ridge. Common birds found in the area include the red-tailed hawk, Stellar's jay, dark-eyed junco, pine siskin, red crossbill, Clark's nutcracker, mountain chickadee, yellow-rumped warbler, warbling vireo, western tanager, American robin, Northern flicker and pygmy nuthatch.

Threatened, Endangered and Rare Species

The Endangered Species Act requires the NPS to identify and manage federally listed threatened or endangered species. It is well within the spirit of the Endangered Species Act that RMNP manage state-listed threatened and endangered species, state special concern species, and any species considered sensitive or rare to RMNP to prevent future federal listing.

Appendix III is the list of endangered, threatened and rare species for RMNP. These species are either known to occur in RMNP at the present time or have been observed in the park in the past. Appendix IV lists the sources used by RMNP to identify endangered, threatened and rare species that must be protected if found within a project site.

Bald eagles are the only Federally listed threatened species that have been observed in the area. They have been observed in the area during the winter months. There are no bald eagle nesting sites in the vicinity of the alternatives.

The following rare species are either known to occur in the vicinity of the alternative sites at the present time, or have the potential to occur in the area but have never been documented:

Amphibians

There are no known endangered, threatened or rare amphibians in the area of the alternatives.

Birds

- **Northern Goshawk** *Accipiter gentilis* – Listed as vulnerable in Colorado during the breeding season. In RMNP it is a fairly common to uncommon raptor in ponderosa pine, lodgepole pine, spruce/fir and adjacent open meadows. One breeding pair of Northern goshawks occurs in the area from Twins Owls west to the named rock formation “West Sundance.”
- **Peregrine Falcon** *Falco peregrinus anatum* – This species was down listed from the federal endangered species list in 1999. It is presently listed as a species of concern in Colorado. In RMNP one breeding pair occurs in the Lumpy Ridge area and is occasionally observed around the Twin Owls rock formation.

Fish

There are no known endangered, threatened, or rare fish in the area of the alternatives.

Mammals

There are no known endangered, threatened or rare mammals in the area of the alternatives.

Invertebrates

There are no known endangered, threatened or rare insects in the area of the alternatives.

Mollusks

There are no known endangered, threatened or rare mollusks in the area of the alternatives.

Plants

A rare plant survey was completed in August of 1998 by a qualified botanist at the two NPS properties east of the MacGregor Ranch and along the new trail from the 10-acre property to Twin Owls. No rare plants were found. A rare plant survey will be conducted for the 79 acres of NPS land identified for transfer before the land exchange occurs if either alternative is adopted. The following rare plants are known to occur in habitat that is found within the Lumpy Ridge area:

- **Larimer Aletes** *Aletes humilis* – This plant occurs on and around large, west and north-facing cliffs of Silver Plume granite. Also occurs in cracks in massive rocks and in adjacent thin soils composed of disintegrated granite. Also found in duff within ponderosa pine, elev. 6500-8700 feet.
- **Wood lily**, *Lilium philadelphicum* – Habitat is moist woods, thickets and wet meadows in an elevation range from 6,800 to 9,800 feet. The wood lily is known to occur on the north side of Lumpy Ridge, but has not been documented on the south side in the vicinity of the alternatives.
- **Weber Monkey Flower** *Mimulus gemmiparus* – Small flowering plant that occupies moist, sloping, seepy granite domes.

- **Rocky Mountain Cinquefoil** *Potentilla effusa* var. *rupinicola* – Habitat is granitic outcrops or thin, gravelly granitic soils with west or north exposure. Often associated with ponderosa pine or limber pine. Can be found in the same habitat as *Aletes humilis*. Within the park it has been found above 9,500 feet, which is higher than the alternative sites. Its only known location in the park is miles away from the alternative sites.

Air Quality

The Clean Air Act amendment of 1977 recognizes the need to protect visibility and air quality in national parks. RMNP is a mandatory Class I area. At the present time visitor use has little impact on air quality in the park. However, visibility is noticeably impaired in the park 90% of the time. Although pollutants have not been traced to the source, it is likely that pollutants come from the Front Range of Colorado, and as far away as Mexico, Texas, and Los Angeles, California.

Natural Soundscapes

An important part of the NPS mission is to preserve natural soundscapes and to protect natural soundscapes from degradation due to noise (undesirable human-caused sound). The natural soundscape is the aggregate of all the natural sounds that occur in parks, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive, and can be transmitted through air, water, or solid materials. Some natural sounds in the natural soundscape are also part of the biological or other physical resource components of the park. Examples of such natural sounds include:

- Sounds produced by birds, frogs, or katydids to define territories or aid in attracting mates;
- Sounds produced by bats to locate prey or navigate;
- Sounds received by mice or deer to detect and avoid predators or other danger; and
- Sounds produced by physical processes, such as wind in the trees or running water.

About 95 per cent of the park is potential, recommended or designated wilderness, where natural sounds and solitude are considered important resources. Lumpy Ridge is within potential and recommended wilderness, but the Twin Owls and Gem Lake parking lots are not, nor will the new parking lot described in Alternatives 1 through 4. The NPS will strive to preserve natural sounds associated with the physical and biological resources of the park wherever possible. Activities causing excessive or unnecessary unnatural sounds in or adjacent to the park will be monitored, and action will be taken to prevent or minimize unnatural sounds that adversely affect park resource or values or visitors' enjoyment of them (NPS 77, 1994). In 1998, commercial air tours over the Park were permanently banned (Section 126 of a 1998 Omnibus Bill).

Noise measurements are not available for the Twin Owls/ MacGregor Ranch area. Most visitors that use the Twin Owls parking lot are climbers and hikers who park their vehicles and enter the backcountry of the park. Most vehicle traffic occurs in the morning and afternoon with a smaller amount of traffic coming and going during the middle of the day.

Most horseback riders are local property owners and NPS employees. There is one livery that offers horseback rides into the park that utilizes the Gem Lake Trail. There are a few visitors who drive into the Twin Owls parking lot to park and not hike, preferring to stay in their vehicle just for the scenic view. This happens more often during the winter.

Artificial sound along Devils Gulch Road and into the Twin Owls and Gem Lake parking areas are introduced primarily from vehicle traffic. Noise levels are greatest during peak visitor use periods in the summer when traffic volume is high. Weekends get more use than weekdays throughout the year. Maintenance activities along the access road to the Twin Owls parking lot and along Devils Gulch create temporary noise impacts.

Lightscape

In accordance with National Park Service *Management Policies* (2001), the National Park Service strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human caused light. A night sky free from light pollution is considered an important resource.

About 95 per cent of the park is potential, recommended or designated wilderness, where natural light are considered important resources. Lumpy Ridge is within potential and recommended wilderness, but the Twin Owls and Gem Lake parking lots are not, nor will the new parking lot described in Alternatives 1 through 4. Artificial light along Devils Gulch Road and into the Twin Owls and Gem Lake parking areas are introduced primarily from vehicle traffic.

Wilderness

Lumpy Ridge is within recommended or potential wilderness. The existing parking lots and the alternative parking lot locations are not within recommended or potential wilderness. The Alternative 1 site is presently not adjacent to recommended wilderness but would be once the proposed land exchange occurs. The parking lot as described in Alternatives 2 and 3 would not be adjacent to recommended wilderness. The parking lot as described in Alternative 4 would be near potential wilderness. The current Twin Owls parking lot is located adjacent to recommended wilderness.

The Twin Owls parking lot, which has existed for several decades, is not predominately of wilderness value, but about 111 acres of MacGregor Ranch land identified for exchange could be added to recommended wilderness. About 65 acres of the 70 acres of land that would be transferred to MacGregor Ranch was identified as potential wilderness and would be removed from further consideration. There would be a net gain of about 46 acres of recommended wilderness if the land transfer occurs. About five acres of the 70 acres of RMNP land identified for exchange is not being considered for wilderness designation because of an access road that leads to a former Town of Estes Park water treatment plant. In addition, the road leads to an historic sawmill site, and a portion of the road is occasionally used as a staging area for search and rescue operations. If the exchange occurred, the park would retain the right to continue to use the staging area and access road.

CULTURAL RESOURCES

The MacGregor Ranch, homesteaded in 1873, was entered on the National Register of Historic Places in 1989 (NR89001008 – State site No. 5LR807). The National Register District Boundary corresponds to the 1,221-acre conservation easement that the NPS acquired in 1983 (Figure 2). The district boundary also encompasses the 10.04-acre and the 1.48-acre parcels the NPS purchased in 1983. Since MacGregor Ranch is an inholding within the boundaries of RMNP and the park owns a conservation easement on the ranch, the NPS bears some responsibility to resolve the impacts to the National Register District.

An archeological survey was conducted in 1999 on almost all of the 1,221-acre MacGregor Ranch National Register Historic District (Brunswick, 2000). A total of 34 individual cultural resources were documented. The majority of the sites were affiliated with early ranch operations. No culturally or chronologically diagnostic sites or isolated finds were noted from prehistoric or historic Native American groups. None of the archeological sites are near any of the alternatives that are considered in this EA.

The seasonal NPS quarters at Twin Owls (Twin Owls #2) was added to the National Register of Historic Places in March 2001 (State site No. 5LR1280). The Twin Owls parking lot has a small impact on the historic ambiance of the seasonal quarters. Because of the existing conflict between the Twin Owls parking lot and ranch activities in the MacGregor Ranch Historic District, the historic character of the ranch is presently compromised.

Located just east of the MacGregor Ranch is a privately owned property with a cottage and outbuildings that were built between 1910 and 1930. Known as Wind Ridge, the NPS learned in February 2002 that this property has been determined eligible for listing on the National Register of Historic Places (State site No. 5LR10348).

Because the alternatives being considered involve the MacGregor Ranch National Register Historic District and a second site that has been determined eligible for listing on the National Register of Historic Places (Wind Ridge), the NPS has initiated formal consultation with the State Historic Preservation Officer (SHPO). The SHPO will have the opportunity to review and comment on this environmental assessment.

SOCIOECONOMIC RESOURCES

Visitor Use

Trail use data for the Twin Owls, Black Canyon and Gem Lake areas of the park is incomplete. Little information is available about the number of hikers who use the area or the average distance they hike. Studies completed by Trahan (1977 and 1978) indicate many visitors hike less than one mile from a trailhead. A more recent visitor survey conducted in 1994 and 1995 indicated that about 48 percent of visitors hike, but it did not determine how far. The amount of visitor use in recommended or potential wilderness in the Lumpy Ridge area is only partially known at this time. In the future, electronic counters placed on the Gem Lake and possibly on the Black Canyon trail would provide the park

with some quantifiable information. It is also unknown the number of climbers that use the Lumpy Ridge area each year.

Data is available for the Gem Lake Trail during the summer months. Table 3 provides information on the number of hikers that used the Gem Lake Trail for part of the year between 1995 and 1998. Use on the Gem Lake trail tends to peak in mid-August.

Table 3 - Gem Lake Trail Statistics

Year	Dates of Operation	Number of visitors counted
1995	6/7/95 through 7/20/95	5,922
1996	7/20/96 through 9/29/96	8,625
1997	6/6/97 through 9/24/97	13,111
1998	5/20/98 through 7/17/98	6,108

Park Operations

The existing parking lot at Twin Owls is unpaved and receives little maintenance. The one-lane access road is approximately $\frac{3}{4}$ mile long from Devils Gulch Road to the parking lot. The access road is entirely on MacGregor Ranch Property. The north half of the access road was paved many years ago and has received little maintenance since. To prevent vehicles from parking on MacGregor Ranch property, Ranch personnel placed fencing along the pavement edge on both sides of the access road in 1999. Only the north half of the road was fenced in this manner. The width between the two fences is not sufficient to allow two-way traffic. Park staff is concerned that the narrowness of the access road could impede emergency vehicles.

The current Gem Lake parking lot is located on a portion of the Larimer County right-of-way for Devils Gulch Road. Portions of the parking lot encroach on adjacent private property. The parking lot is unpaved. RMNP has performed minor maintenance on the parking lot.

The Gem Lake Trail crosses private property for a distance of approximately $\frac{1}{3}$ mile before entering the park. Evidence suggests that in 1915 Clark Blickensderfer granted an easement for the Gem Lake Trail where it crosses private property near the Gem Lake trailhead. RMNP has provided some maintenance along this section of trail.

Local and Regional Economy

When the park was established in 1915, there were 15,000 visitors the first year. Since 1994, visitation at the Park has exceeded 3 million visitors a year and in 2000, almost 3.4 million visitors entered the park. For the past decade, visitation has increased about 2% per year. The Twin Owls and Gem Lake Trailhead parking areas are popular with local residents and rock climbers. The lack of an NPS entrance station is one of the things that attract people to this particular area. With no NPS entrance station, visitors can avoid paying a \$15.00 entrance fee. A backcountry permit still requires a \$15.00 fee for any overnight use, but day use is free in this area of the park.

Along the east slope of the Front Range of the Rocky Mountains is the growing metropolitan area that extends from Cheyenne, Wyoming, on the north, to Pueblo, Colorado, on the south. There are about three million people living in this area, all within a relatively short driving distance of RMNP. The Town of Estes Park is the gateway community on the east side of the park. The full-time population is 5,229 within the Estes Park town limits, and 10,038 within the Estes Valley (which includes the town population).

RMNP is one of the most popular tourist attractions in Colorado. Local economies of towns adjacent to the Park are directly tied to Park visitor expenditures. Based on the NPS Money Generation Model, about \$206.7 million in revenue is generated each year from visitors, and about 4,135 people related to the tourist industry are employed in the counties surrounding the Park including Boulder, Larimer, and Grand Counties. The average amount of money spent in the area (excluding local citizens that use the park) is about \$150 per day, or roughly \$90 on lodging and \$60 on food, retail, and other amenities (NPS 2001).

Estes Park is the gateway community on the east side of the Park. According to 1990 U.S. Census figures, retail trade accounted for almost ¼ of the employment specifically located within Estes Park and Grand Lake (Lepore 2000). Major employers specifically located within Estes Park include Rocky Mountain National Park, Estes Park R-3 School District, Town of Estes Park, the Estes Park Medical Center, YMCA, and Holiday Inn. Median household income in 1996 was \$29,387 in the town of Estes Park and \$31,809 in the Estes Valley (Estes Park community Development Department 1996).

During 2000, the NPS provided permanent employment for about 140 employees and seasonal employment for 316 summer employees, with an annual payroll of about \$9.7 million (Edwards 2001). Many permanent Park employees reside in Estes Park. Most of the park's employees with term appointments and seasonal appointments use existing NPS housing within the Park.

The full-time population of Estes Park in 2000 is 5,413 with an additional 3,476 people living in the Estes Valley area. From 1990 to 1999, Estes Park grew 33% (Colorado Department of Local Affairs 2000). Large population centers along the Front Range in Denver, boulder, Loveland, Longmont, and Fort Collins are within a 1-1/2-hour drive of the park.

Adjacent and Nearby Landowners

Table 4 shows the relationship of adjacent and nearby landowners to the parking lot and access road for the various alternatives.

Table 4 – Adjacent and Nearby Landowners (Excluding the MacGregor Ranch)

Alternative	Landowners Adjacent to Parking Lot	Landowners Adjacent to Access Drive	Nearby Landowners Within Sight of Parking Lot	Nearby Landowners Within Sight of Access Road
1	1 Seasonal	4 Seasonal	None	2 Full-time 4 Seasonal
2	None	None	2 Full-time 4 Seasonal	2 Full time 4 Seasonal
3	None	None (5 land-owners drive by the parking lot to access their homes)	1 Full-time 1 Seasonal	1 Full-time 1 Seasonal
4	None	None	None	None
5	None	None	None	1 Full-time

Despite the fact that a number of the residence in the vicinity of Alternatives 1, 2 and 3 are seasonal, these residences are occupied primarily during the summer when use of the parking lot and access road would be the greatest.

VISUAL RESOURCES

RMNP provides spectacular scenery of natural landscapes including rugged mountain peaks, alpine tundra, forests, rivers, and meadows. The view from the current Twin Owls parking lot offers a scenic vista of Longs Peak unparalleled in most other areas of the park. Some visitors use the current parking lot simply to enjoy the view.

Even as early as 1973 the Superintendent of RMNP, in reference to the Twin Owls parking lot, stated that, “Ultimately we might find a better location for a parking area so that it would be less visible.” The present parking area detracts from the scenic beauty of Lumpy Ridge as viewed from recommended wilderness, Devils Gulch Road, climbing routes on Lumpy Ridge, the MacGregor Ranch Historic District and nearby private lands. The MacGregor Ranch Trustees would like to remove the Twin Owls parking lot and all trailhead activities.

The Alternative 1 through 4 parking lot locations are currently undeveloped.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

This chapter includes a description of the potential environmental impacts on the resources discussed in *Chapter 3 – Affected Environment* from implementation of the No Action alternative and four other alternatives. Potential impacts were identified for all of the alternatives based on a review of relevant scientific literature, previously prepared environmental documents, field investigations, and the best professional judgement of resource specialists.

Methodology

This chapter is organized by resource, and is the scientific and analytical basis for the comparison of alternatives. Impacts are described in terms of context (effects are site-specific, local or regional), duration (short- or long-term), and intensity (none, negligible, minor, moderate, major). The thresholds of change for the intensity of an impact are defined as follows:

- **No impact** – There is no discernable impact
- **Negligible** – The impact is at the lowest level of detection
- **Minor** – The impact is slight, but detectable
- **Moderate** – The impact is readily apparent
- **Major** – The impact is a severe or adverse impact, or of exceptional benefit

Short-term impacts are those that are typically less than several years, such as temporary construction disturbance. Long-term impacts last many years and often result in long-term changes in land use.

Impacts may be direct, indirect or cumulative:

- **Direct effects** are caused by an action and occur at the same time and place as the action.
- **Indirect effects** are caused by the action and occur later in time or farther removed from the place.
- **Cumulative effects** are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future action regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative impacts can result from individually minor, but collectively significant actions taking place over time. The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act, require assessment of cumulative impacts in the decision making process for federal projects. Cumulative impacts are considered for the No Action alternative and the other four alternatives

Past Actions and Reasonably Foreseeable Activities

Cumulative effects were determined by combining the impacts of the proposed alternatives with potential other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or foreseeable future projects within Rocky Mountain National Park. Reasonably foreseeable future activities are those actions independent of the relocation of the Twin Owls and Gem Lake trailheads that

could result in cumulative effects when combined with the effects of the proposed project. The cumulative effect analysis area includes the MacGregor Ranch and/or RMNP as appropriate for each resource.

Past Actions

A variety of previous activities, including the homesteading of the MacGregor Ranch, cattle grazing, irrigation, haying and timber harvesting, have modified resources in the project area. The development of homes, driveways and trails in the vicinity of the alternative parking lot locations has also altered the landscape.

Reasonably Foreseeable Activities

One of the goals of the MacGregor Ranch Trustees is to operate the Ranch as it might have existed prior to the advent of the tractor. The exclusion of NPS visitor traffic from the Ranch will help the Ranch to portray an authentic “window to the past.”

Impairment of Park Resources and Values

In addition to determining the environmental consequences of the preferred and other alternatives, NPS policy requires analysis of potential effects to determine whether actions would impair park resources (Management Policies 2001).

The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values. However, the laws do give the NPS the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute an impairment. An impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park; or
- Identified as a goal in the park’s general management plan or other relevant NPS planning documents.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. An impairment finding is included in the conclusion section for the following impact topics: topography, geology, soils, vegetation, wildlife, threatened, endangered, and rare

species, air quality, natural quiet, sounds, and light, cultural resources, and visual resources.

Comparison of Alternatives

The type of impact for each of the alternatives varies because of the location of the proposed parking lots, the location and length of trail and access connections, the amount of land to be exchanged between the MacGregor Ranch and RMNP, and proximity to nearby landowners.

Environmental Consequences

The park's mandate is to protect natural resources and provide for the benefit and enjoyment of the people of the United States. Therefore, the NPS would like to implement the alternative that continues to provide quality service to park visitors with the least impact to park resources, the MacGregor Ranch or to nearby landowners. The best alternative will provide the greatest value for the investment while minimizing the externalities caused by the decision (water or air pollution is an example of an externality).

4.1 Topography, Geology and Soils

Effects of the No Action Alternative

Because there would be no new construction, there would be no new direct impact on topographic, geologic or soil resources with the No Action Alternative. Soil resources would not be disturbed. The current Twin Owls parking lot is unpaved and has exposed cut slopes on the north side of the parking lot. Erosion of the cut slopes and unpaved parking lot surface would continue and negligible impacts would occur.

Effects of the Parking Lot Relocation Alternatives

All of the relocation alternatives would require some excavation for a new parking lot. Minor alternations to existing topography would occur with all of the relocation alternatives. Ground disturbance would occur with the construction of a parking lot, access road, and a trail to connect the parking lot to existing trails in RMNP (please refer to Table 5). With all of the relocation alternatives the existing Twin Owls parking lot, which covers about 0.4 acre, would be reclaimed. With the concurrence of Larimer County and the surrounding landowners, the Gem Lake parking lot, which covers about 0.25 acre, would be reclaimed if Alternative 1 or 2 is selected .

There would be a minor loss of soil material from wind and water erosion during construction until disturbed areas are revegetated. A short-term loss in soil productivity would occur from disruption of soil biological processes and changes in soil physical properties from construction disturbance. Since more parking spaces will be provided with all of the relocation alternatives, backcountry use may increase in the Lumpy Ridge, Black Canyon and possibly the Gem Lake areas with a resulting indirect impact on soil. Any loss of soil in the backcountry is considered to be negligible. There are some areas

Table 5 – Disturbed and Reclaimed Area with the Various Alternatives

Alternative	Parking Lot Disturbed Area	Access Road Disturbed Area	Trail Disturbed Area	Area Reclaimed	Net Disturbed Area
1	About 1.0 acre of ponderosa pine and open meadow habitat would be developed.	About 1.5 acre of ponderosa pine and open meadow would be developed.	About 0.4 acre of ponderosa pine and open meadow habitat would be developed.	About 0.65 acre of open meadow habitat would be restored.	2.25 acres
2	About 1.0 acre of ponderosa pine habitat would be developed.	About 0.25 acre of ponderosa pine and open meadow habitat would be developed.	About 0.75 acre of ponderosa pine and open meadow would be developed.	About 0.65 acre of open meadow habitat would be reclaimed.	1.35 acres
3	About 1.0 acre of open meadow habitat would be developed.	No additional disturbance is expected.	About 0.9 acre of open meadow would be developed.	About 0.4 acre of open meadow habitat would be reclaimed	1.50 acres
4	About 1.0 acre of open meadow would be developed.	About 3.25 acres of upland grass and ponderosa pine habitat would be developed.	About 0.15 acre of open meadow would be developed	About 0.4 acre of open meadow would be reclaimed.	4.00 acres
5	About 0.65 acre would remain disturbed as existing parking lots.	No new disturbance is anticipated.	No new trail would be needed.	No area would be reclaimed.	0.65 acre of existing disturbed area

near the Alternative 1 location that climbers may find desirable for “bouldering.” Some social trails to these areas may be established leading to a long-term, but negligible loss of soil.

Effects of the Land Exchange and Black Canyon Trail Realignment

The proposed land exchange would transfer 84 to 100 acres of land at the east end of the MacGregor Ranch to the NPS. There are several rock formations within this area that would be available to rock climbers for bouldering. It is likely that there would be minor impacts to these rock formations as a result of bouldering.

The 70-acre parcel in the Black Canyon area proposed to be transferred from RMNP to the MacGregor Ranch was used continuously by the Ranch for cattle grazing from the late 1800’s until January, 2001. The return of this acreage to the MacGregor Ranch would not result in any additional impacts to topography, geology or soils. Approximately 9 acres located just west of the existing Twin Owls parking lot would be transferred from RMNP to the MacGregor Ranch. This area has not been grazed in the past. Cattle grazing of this area would result in moderate impacts to soils.

As part of the land exchange, the MacGregor Ranch would transfer to RMNP between 100 and 115 acres that have previously been available for cattle grazing. Although this acreage is of limited grazing value because of the existence of rock outcrops, RMNP would acquire more acreage than it is giving up.

If Alternative 2, 3, or 4 is selected, RMNP would transfer to the MacGregor Ranch the 10.04 and 1.48-acre parcels acquired from the Ranch in 1983. The possible sale and development of these parcels could result in a moderate impact to topographic, geologic and soil resources on those parcels. Those impacts would not affect topographic, geologic or soil resources within the park itself.

The realignment of the Black Canyon Trail would disturb about 1.0 acre of soil, but there would be no net loss because the existing portion of trail will be restored.

Cumulative Impacts

Geologic and soil resources in the vicinity of the MacGregor Ranch have been previously impacted from ranching activities, visitor use and construction of roads, trails, homes and other structures. Although other construction and maintenance projects are planned in the Park, the majority of these projects would repair, replace, and rehabilitate existing facilities. Disturbances from these future activities would typically be concentrated in and adjacent to existing developed areas within RMNP. The combined impact of historic disturbances, future construction and maintenance projects, the proposed relocation of the Twin Owls and Gem Lake parking lots and impacts caused by bouldering would have a minor cumulative effect on geologic and soil resources in the montane zone of RMNP.

Proposed Mitigation

Best management erosion and sediment control practices would be implemented to minimize soil loss during construction. Topsoil salvage, replacement, and revegetation with native plants would minimize the long-term effect on soil productivity and the loss

of soil and vegetation material. Erosion control measures, such as the installation of water bars and drainage channeling, would be done on any new trail construction. When possible, topsoil from the new Black Canyon Trail alignment would be used to restore the existing portion of trail that would be closed

If the existing Twin Owls and Gem Lake parking lots are restored, they would be scarified, regraded to approximate natural grade, and then revegetated with native plants, which would improve soil aeration and drainage and help prevent the invasion of exotic plants. Revegetation with native species would be done on any areas disturbed by the construction of a parking lot or access road.

Conclusion

The land exchange would result in **minor impacts** because rock outcrops that are currently off-limits would become available to rock climbers for bouldering. This impact would not occur if Alternative 5 is selected. For Alternatives 1, 2, and 3 there would be a **minor impact** due to soil disturbance during construction. For Alternative 4 there would be a **moderate impact** to soil during construction primarily due to the extent of soil disturbance involved in improving the 1.35-mile access road.

Because there would be no major, adverse impacts to topography, geology, or soils whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling legislation of RMNP; 2) key to natural or cultural integrity of the Park; or 3) identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.2 Vegetation

Effects of the No Action Alternative

Under the No Action Alternative, there would be no new vegetation disturbance or clearing. Minor impacts to vegetation adjacent to the parking lot would continue to occur as a result of erosion and sedimentation from the unpaved parking lot and exposed cut slopes located on the north side of the parking lot. The No Action Alternative would not involve land-disturbing activities likely to increase the number and distribution of exotic plants or noxious weeds. However, there are existing infestations of invasive exotic species in the area that require ongoing control work.

Effects of the Parking Lot Relocation Alternatives

Ground disturbance and loss of vegetation would occur with the construction of a parking lot, access road, and a trail to connect the parking lot to existing trails in RMNP. Table 6 shows the number of trees that would be lost with each alternative. With all of the relocation alternatives the existing Twin Owls parking lot, which covers about 0.4 acre, would be reclaimed and planted with native vegetation. The Gem Lake parking lot, which covers about 0.25 acre, would be reclaimed and planted with native vegetation if Alternative 1 or 2 is selected.

Since more parking spaces would be provided in all of the relocation alternatives, backcountry use may increase in the Lumpy Ridge, Black Canyon and Gem Lake areas with a resulting indirect impact on plants. Any loss of vegetation in the backcountry is

Table 6 – Net Disturbed Area and Tree Loss With the Various Alternatives

Alternative	Net Disturbed Area	Trees Removed
1	2.25 acres	7 Ponderosa Pine
2	1.35 acres	12 Ponderosa Pine
3	1.50 acres	No trees would be removed
4	4.00 acres	12 Ponderosa Pine if the parking lot is located south of Black Canyon Creek 2 Ponderosa Pine if the parking lot is located north of Black Canyon Creek
5	0.65 acre of existing disturbed area	No trees would be removed

considered to be minor with implementation of any of the alternatives. There are some areas near Alternative 1 that climbers may find desirable for “bouldering.” A loss of lichens and mosses growing on rocks would most likely occur. Some social trails to these areas may be established leading to a long-term loss of vegetation.

Any new parking lot, building a new road or building a new trail has the potential to provide habitat conducive to exotic plant invasion, which in the long-term could impact indigenous vegetation (Benninger 1992, McLendon 1996). Parking lots and associated trailheads in the montane zone are notorious in RMNP for invasive exotic plant invasion, due in large part to park visitors unintentionally introducing weed seeds. Improved access for equestrians may also lead to the further spread of invasive exotic plants. Several invasive exotic plants presently exist in the vicinity of the Twin Owls and Gem Lake parking lots: common mullein (*Verbascum thapsus*), houndstongue (*Cynoglossum officinale*), yellow toadflax (*Linaria vulgaris*), and cheatgrass (*Bromus tectorum*). Park visitors could have easily introduced these plants inadvertently. Houndstongue is rapidly expanding in the Lumpy Ridge area, which is a concern. The current situation is considered a minor impact. The alternative sites are relatively free of any invasive exotic plants, but would be subjected to exotic plant invasion if a parking lot were built. RMNP is proactive in managing invasive exotic plants and controls exotic species of concern as quickly as possible. In 1999 and 2000, exotic plants were removed from around the Twin Owls parking lot and further work occurred in 2001.

Effects of the Land Exchange and Black Canyon Trail Realignment

The 70-acre parcel in the Black Canyon area to be transferred from RMNP to the MacGregor Ranch was used continuously by the Ranch for cattle grazing from the late 1800’s until January, 2001. While under NPS ownership (since 1976) the grazing lease limited the number of cattle that could be grazed on the land. The return of this acreage to the MacGregor Ranch is not expected to result in any additional impacts to vegetation, although there would be no limit imposed on the number of cattle that could be grazed on this parcel. Approximately 9 acres located just west of the existing Twin Owls parking lot would be transferred from RMNP to the MacGregor Ranch. This area has not been

grazed in the past. Cattle grazing of this area would result in moderate impacts to vegetation.

As part of the land exchange, the MacGregor Ranch would transfer to RMNP between 100 and 115 acres that have previously been available for cattle grazing. Although this acreage is of limited grazing value because of the existence of rock outcrops, RMNP would acquire more acreage than it is giving up. Vegetation would be protected from cattle grazing within the park by the installation of a fence along the boundary between the Ranch and RMNP.

If Alternative 2, 3, or 4 is selected, RMNP would transfer to the MacGregor Ranch the 10.04 and 1.48-acre parcels acquired from the Ranch in 1983. The possible sale and development of these parcels could result in a moderate impact to vegetation on those parcels. Those impacts would not affect vegetation within the park itself.

The realignment of the Black Canyon Trail would result in the loss of about 1.0 acre of vegetation, primarily grasses, shrubs and forbs. Restoration would be done on the old trail alignment. Because that portion of the restored trail would be located on the MacGregor Ranch, grasses would be used in the restoration.

Cumulative Impacts

Vegetation in the vicinity of the MacGregor Ranch has been previously impacted from ranching activities, visitor use, timber harvesting, and construction of roads, trails, homes and other structures. Although other construction and maintenance projects are planned in the Park, the majority of these projects would repair, replace, and rehabilitate existing facilities. Disturbances from these future activities would typically be concentrated in and adjacent to existing developed areas within RMNP. The combined impact of historic disturbances, future construction and maintenance projects, and the proposed relocation of the Twin Owls and Gem Lake parking lots and new trail construction would have a minor cumulative effect on vegetation parkwide. Within the montane zone of the park, the cumulative impact to vegetation is expected to be moderate because of the extent of disturbance that is occurring within this zone.

Mitigation

Revegetation with native plants would minimize the long-term loss of vegetation.

All disturbed areas resulting from the implementation of one of the alternatives in this EA would be monitored for invasive exotic plants. If any invasive exotic plants are found they would be controlled.

For screening purposes, more ponderosa pines, juniper and aspen would be planted around the alternative relocation sites. Only native trees from the local area would be used in planting, which may require some transplanting or propagation in the park's greenhouse.

For the land that is being transferred from RMNP to the MacGregor Ranch, RMNP will seek to include the following mitigation measure in the conservation easement:

- Only native plants and grasses will be planted.

Conclusion

For all of the parking lot relocation alternatives there would be a **minor impact** due to loss of vegetation during construction of the parking lot, access road and trails. This loss will be partially mitigated when disturbed areas have been revegetated and with the reclamation of the current Twin Owls parking lot. Increased public use of areas of the MacGregor Ranch that are currently not open to public use will also result in a **minor impact** to vegetation. Also, with the proposed land exchange, more acreage will be subjected to cattle grazing than will be protected from cattle grazing. This is expected to result in a **minor impact** to vegetation.

Because there would be no major, adverse impacts to vegetation whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling legislation of RMNP; 2) key to natural or cultural integrity of the Park; or 3) identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.3 Wetlands

Effects of the No Action Alternative

There are no jurisdictional wetlands associated with the current Twin Owls parking lot. Selecting the No Action alternative will result in no wetland or water quality impacts

Effects of the Parking Lot Relocation Alternatives

There are no jurisdictional wetlands or perennial streams associated with Alternatives 1, 2 or 3. The two alternative parking lots and the access road associated with Alternative 4 are located in the vicinity of Black Canyon Creek, which is a perennial stream. Along the length of the stream there are several jurisdictional wetlands. The parking lot as proposed in Alternative 4A would be located on the north side of Black Canyon Creek, and the access road would have to cross the creek. Because the current access road and crossing are only one-lane wide, a new creek crossing will be required in order to accommodate two-way traffic. The new creek crossing is expected to impact approximately 0.25-acre of adjacent aspen, willow, and riparian habitat. Within this 0.25-acre some wetlands would be directly impacted, and some silting would occur in Black Canyon Creek both during and immediately following construction. Silting would have a minor indirect impact on wetlands that are located downstream and downstream water quality.

Effects of the Land Exchange and Black Canyon Trail Realignment

For almost a century, the MacGregor Ranch irrigated a meadow that is currently located within Rocky Mountain National Park. The Ranch maintained the right to irrigate the meadow and to graze cattle on it until January 2001. Wetlands are present within the meadow due to the presence of irrigation water and its proximity to Black Canyon Creek. The condition of these wetlands will not be altered if the meadow is transferred to the MacGregor Ranch through the proposed land exchange because the Ranch will continue to use the meadow as it has for almost a century. If there is no land exchange and RMNP retains the meadow, the irrigation water that belongs to the MacGregor Ranch will be

used for other purposes. It is probable that some wetlands within the meadow will disappear if the irrigation water is diverted elsewhere.

The proposed Black Canyon Trail realignment crosses some intermitted streams and small wetlands. Bridges and culverts would be used at those locations, and the impacts to wetlands and water quality would be negligible.

Cumulative Impacts

Over the course of the last 100 years, new wetlands have been created on the MacGregor Ranch as a result of flood irrigation of pastures. Prior to 1915 cattle grazing and timber harvesting impacted wetlands in the area that was to become Rocky Mountain National Park. Since its establishment, wetlands have been impacted within the national park through the building of roads, trails, campgrounds and structures.

The Bear Lake Road reconstruction project within the park is expected to directly impact 0.21 acre of wetland. A maximum of 0.1-acre of wetland would be directly impacted if Alternative 4A in this EA is selected and a new crossing is constructed over Black Canyon Creek. Wetland losses from the Bear Lake Road reconstruction project and will be offset by the reclamation of wetlands at the site of the current Glacier Creek Livery (0.88-acre) and reclamation of a wetland at Hidden Valley (1.2-acre).

Although other construction and maintenance projects are planned in the Park, the majority of these projects would repair, replace, and rehabilitate existing facilities. Disturbances from these future activities would typically be concentrated in and adjacent to existing developed areas within RMNP. The combined impact of historic disturbances, future construction and maintenance projects, and the proposed relocation of the Twin Owls and Gem Lake parking lots and new trail construction would have a minor cumulative effect on wetlands.

Proposed Mitigation

Best management practices would be implemented to protect nearby wetlands, riparian areas and water quality during construction of the access road, parking lot, or the realignment of the Black Canyon Trail. Erosion control devices and prompt revegetation with native plants would minimize impacts to Black Canyon Creek and associated wetlands.

Conclusion

For the No Action alternative and Alternatives 1, 2 or 3 there would be **No impact** to wetlands. For Alternative 4A, which would require a new crossing over Black Canyon Creek, there would be a **moderate impact** to wetlands and water quality due to direct impacts to 0.1-acre of wetland habitat and possible downstream indirect impacts from silting. There would be a **negligible impact** to wetlands as a result of the proposed land exchange and the proposed relocation of the Black Canyon Trail.

Because there would be no major, adverse impacts to wetlands and water quality whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling legislation of RMNP; 2) key to the natural or cultural integrity of the Park; or 3)

identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.4 Wildlife

Effects of the No Action Alternative

There would be no new impacts to wildlife under the No Action Alternative. No land-disturbing activities would occur and there would be no loss of wildlife habitat.

Effects of the Parking Lot Relocation Alternatives

Between 1.35 and 4.0 acres of habitat would be lost if a new parking lot, access road and connecting trail are constructed. The habitat around the two existing parking lots (Twin Owls and Gem Lake) has been disturbed because of the presence of humans and vehicles for many years and has fewer wildlife than the presently undisturbed habitat at the Alternative 1 through 4 sites.

Invasive exotic plants are found at the Twin Owls and Gem Lake parking lots and therefore the vegetation community is of lower quality as compared to the other sites where vegetation is composed primarily of native species. Exotic plants have an indirect impact on wildlife. Besides losing 1.35 to 4.0 acres of habitat if a new parking lot is built, the loss of habitat in the short-term would be higher because the undisturbed habitat at the alternative sites is in a more pristine state. However, in the long-term if the Twin Owls and Gem Lake parking lots are restored, the area will eventually reach conditions that can be found on undisturbed habitat and would partially offset the loss of habitat.

Alternatives 4 may have a minor impact on bighorn sheep that use the western portion of Lumpy Ridge. Any alternative in ponderosa pine would have an impact on the Abert's squirrel, which is common in the Lumpy Ridge area.

Long-term effects from any alternative would be minimal on elk and mule deer migratory routes since fencing installed by the MacGregor Ranch and surrounding landowners has already affected migration patterns to some degree. Most fences in the area are not a barrier to an elk or mule deer, but these animals will avoid them if there is a way around. Relocation of the Twin Owls parking lot would likely benefit elk and deer because the MacGregor Ranch would remove the fence that has been installed along both side of the access road to the parking lot.

If Alternatives 4 is implemented, the MacGregor Ranch would erect a fence along both sides of the access road, which is 1.3 miles long. This fence would have a moderate impact on elk, mule deer and bighorn sheep movement through the ranch.

Fencing would be installed at the Alternative 1 through 4 parking lot locations to keep the MacGregor Ranch cattle from entering the parking lot or crossing the access roads. This fencing would have a minor impact on elk and mule deer movement through the ranch.

Some elk may be displaced during construction. The restoration of habitat at the Twin Owls parking lot would enhance elk and mule deer winter range in that area in the long-

term. The Alternative 1 site is located in an area that has some existing disruption to elk and deer because fencing and homes are already present in that area.

All of the relocation alternatives require the construction of connecting trails. There would be a loss of nesting habitat for some birds, and the presence of horses and people moving through the area along any new hiking trail would cause some wildlife to relocate to other areas. Other animals such as elk and mule deer will adapt.

Hiking trails can be a conduit for exotic plants, and in the long-term invasive exotic plants may impact adjacent undisturbed habitat and the wildlife that use it (Benninger 1992, McLendon 1996). The potential for increased horse use may result in the further spread of invasive exotic plants.

Because of the increased number of parking spaces discussed in all of the relocation alternatives, there could be an increase in backcountry use by visitors, causing secondary impacts to wildlife. Specifically, visitor use in the Gem Lake area may increase if Alternative 1 is implemented because the hike to Gem Lake becomes shorter. If Alternative 1 or 2 is implemented, climbing may increase on named rock formations east of Twin Owls while climbing on named rock formations on the far west end of Lumpy Ridge may decrease. Alternative 4 would likely cause an increase in climbing at the West end of Lumpy Ridge and possibly a decrease in use on the east end, causing more wildlife impacts in one area and less in another. An increase in climbing east of Twin Owls may impact nesting white-throated swifts, band-tailed pigeons and possibly the prairie falcons that occasionally nest on Twin Owls and in the Gollum's arch area.

Alternative 4A places the proposed parking lot on the north side of Black Canyon Creek in the vicinity of three alternative nest sites for a pair of Golden Eagles (nests are located on The Parish, Thunder Buttress and an unnamed rock formation between Thunder Buttress and The Needle). If this alternative is selected, it could have a moderate impact on the Golden Eagles by causing them to abandon one or more of the three alternative nesting sites.

Closing the Twin Owls parking lot and removing vehicles would enhance breeding success when prairie falcons nest on Twin Owls, and also enhance potential peregrine falcon habitat. Twin Owls is a historic peregrine falcon breeding site. The last time peregrine falcons nested on Twin Owls was in 1959 (park files). Peregrine falcons disappeared from RMNP in the early 1960's because of the pesticide DDT, which caused eggshell thinning, which impacted nesting success. The peregrine falcon was listed as endangered in 1973, but because of the banning of DDT in 1972 and an ambitious recovery program, the falcon was delisted in 1999. Since their recovery, the peregrine falcon may be avoiding the Twin Owls rock formation because of increased visitor use of the Twin Owls parking lot since the 1970's. Hence, closing the Twin Owls parking lot may provide an opportunity for peregrines to nest once again along the south facing side of Lumpy Ridge at Twin Owls or on nearby on nearby cliffs.

Effects of the Land Exchange and Black Canyon Trail Realignment

The MacGregor Ranch has been used since the late 1800's for cattle grazing and hunting. Wildlife would be protected from these activities on the acreage that is transferred from

the MacGregor Ranch to RMNP under the proposed land exchange. A conservation easement would be placed on all of the acreage that is transferred from RMNP to the MacGregor Ranch, although cattle grazing and hunting would be permitted. The purpose of the conservation easement would be to protect natural and cultural resources. The conservation easement would be similar to the existing conservation easement on the remainder of the Ranch.

Under Alternatives 2, 3, or 4 the 10.04 and 1.48-acre parcels that are currently owned by RMNP would be transferred to the MacGregor Ranch without a conservation easement. If those parcels are sold and developed, there would be a minor to moderate long-term impact to wildlife. Development of those parcels would not impact wildlife within the park itself.

A fence would be installed along the boundary between the MacGregor Ranch and RMNP to keep cattle out of the park. This fence would have a minor impact on elk, mule deer and bighorn sheep movement through the ranch.

The realignment of the Black Canyon Trail, which moves it closer to the base of Lumpy Ridge, may have a minor impact on one nesting pair of prairie falcons and cause them to abandon one of their alternative nesting sites. The realignment of the trail could also have a moderate impact one nesting pair of golden eagles, causing them to abandon one or more of their alternative nesting sites on Lumpy Ridge. The presence of horses and people on the new trail alignment would cause some wildlife to relocate to other areas. Other animals such as elk and mule deer will adapt.

Cumulative Impacts

In the short-term if a new parking lot is built, the loss of elk winter range would be negligible because of the abundance of open meadows in the area. However, in the long term, the loss of from 1.35 to 4.0 acres would contribute to a moderate cumulative impact to elk and mule deer habitat because of additional residential and commercial development on good elk and mule deer winter range outside the park. If Alternative 2, 3 or 4 is implemented 11.52 acres of land that is presently parkland would be transferred to the MacGregor Ranch. This property may be developed in the future. This would result in a cumulative moderate impact to elk, mule deer and other wildlife habitat. Within the next decade the best open space left in the Lumpy Ridge area may be inside RMNP, which includes the 1,221 acres of the MacGregor Ranch. Continued livestock grazing on the 79 acres of parkland proposed to be transferred to MacGregor Ranch would be offset by permanently closing 111 acres of MacGregor Ranch to livestock grazing. That acreage would be transferred to RMNP. There would be a net gain of 32 acres of wildlife habitat. Elk, and mule deer would continue to have access to the acreage that is transferred to the MacGregor Ranch. Elk, mule deer and livestock have coexisted on the MacGregor Ranch land for many years.

Proposed Mitigation

If selected for implementation, no construction would be done on the Black Canyon Trail realignment or the Alternative 4A parking lot between March 15 and July 15 if nesting Golden Eagles or Prairie Falcons are present along the western portion of Lumpy Ridge.

Best management practices would be implemented to protect nearby vegetation and wildlife habitat during construction. Topsoil salvage, replacement, and revegetation with native plants would minimize the long-term effect on wildlife habitat. Any trail realignment would be done so there will be negligible impacts to nesting birds of prey. Temporary climbing closures established each spring would mitigate climbing impacts to breeding raptors. For the land that is being transferred from RMNP to the MacGregor Ranch, RMNP will seek to include the following mitigation measures in the conservation easement:

- A maximum number of Animal Unit Months (AUMs) so that elk and mule deer winter range is not unduly impacted.
- Ground squirrels, which are a prey base for raptors, will be protected to the extent possible.

Conclusion

For Alternatives 1, 2, 3 and 4B there would be a **minor impact** to wildlife due to displacement during construction and loss of 1.35 to 4.0 acres of wildlife habitat in the long-term. Alternative 4A could have a **moderate impact** on one pair of nesting Golden Eagles. The Black Canyon Trail realignment could have a **moderate impact** on one pair of nesting Prairie Falcons and a **moderate impact** on one pair of nesting Golden Eagles.

Because there would be no major, adverse impacts to wildlife whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling legislation of RMNP; 2) key to the natural or cultural integrity of the Park; or 3) identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.5 Threatened, Endangered or Rare Species

Effects of the No Action Alternative

There would be no effect on threatened, endangered, or sensitive (rare) species under the No Action Alternative. No land disturbing activities would occur and there would be no loss of habitat. The existing access road, and the Twin Owls and Gem Lake parking lots are not known to cause direct adverse impacts to any threatened, endangered, or sensitive species.

Effects of the Parking Lot Relocation Alternatives

The bald eagle is the only known Federally listed threatened wildlife species known to occur in the project area. Bald eagles have been observed in the area during the winter months, but do not nest in the area. The parking lot relocation alternatives would have no impact on bald eagles.

There would be no known impacts to fauna that is Federally listed as endangered or threatened if any of the alternatives are implemented. The Northern goshawk and the prairie falcon are the only sensitive species known to occur in the area. Neither of these species is listed as endangered or threatened. If Alternative 4 is selected there could be minor impacts to one breeding pair of Northern Goshawks that use the area from Twin Owls west to "West Sundance" for nesting and foraging. RMNP will seek to protect ground squirrels via a

conservation easement on any land that is transferred from the park to the MacGregor Ranch. Ground squirrels are an important prey base for raptors, including the Northern goshawk and prairie falcon.

If the present Twin Owls parking lot is closed it would enhance Northern goshawk habitat by removing vehicles from within the home range of this breeding pair.

There are no known threatened, endangered or rare plants within the project site. The area where the parking lot is proposed for the Alternative 1 construction and the access road were surveyed for rare plants in 1998 and again in 2001. No rare plants were found. The other alternative sites would be surveyed for rare plants if one of them is selected.

No known threatened, endangered or rare plants occur on the 79 acres of NPS land that would be transferred to MacGregor Ranch. Approximately 70 acres that would be transferred to the MacGregor Ranch has been subjected to livestock grazing for over 100 years and by elk grazing for the past 87 years. The 79 acres of open meadow and ponderosa pine savanna habitat that would be transferred to MacGregor Ranch is used by birds of prey that nest or forage along Lumpy Ridge.

Effects of the Land Exchange and Black Canyon Trail Realignment

The bald eagle is the only known Federally listed threatened wildlife species known to occur in the project area. Bald eagles have been observed in the area during the winter months, but do not nest in the area. The proposed land exchange and the Black Canyon Trail realignment would have a negligible impact on the bald eagle.

If the Black Canyon Trail is realigned, there could be a moderate impact to prairie falcons and one breeding pair of Northern Goshawks. These species are not Federally listed as endangered or threatened. However, they are considered sensitive (rare) species. The beginning portion of the proposed trail realignment would pass close to one rock formation that is often used by prairie falcons and near two nest trees where Northern goshawks have nested in past years.

Cumulative Impacts

The parking lot relocation alternatives are expected to have no impact on the bald eagle, which is a Federally listed threatened species. The proposed land exchange and the proposed Black Canyon Trail realignment is expected to have a negligible impact on bald eagle.

The parking lot relocation alternatives are expected to have a minor impact and the proposed land exchange and Black Canyon Trail realignment are expected to have a moderate impact on prairie falcons and Northern goshawk, which are considered sensitive (rare) species.

There are no known Federally listed endangered or threatened plants in the vicinity of the parking lot relocation alternatives or the Black Canyon Trail realignment.

Proposed Mitigation

RMNP will seek to protect ground squirrels via a conservation easement on any land that is transferred from the park to the MacGregor Ranch. Ground squirrels are an important prey base for raptors, including the Northern goshawk and prairie falcon.

A rare plant survey would be conducted at the Alternative 2, 3 or 4 sites if one of them is selected. The access road and potential trail locations (including the Black Canyon Trail realignment) for any alternative that is selected would also be surveyed for rare plants. Rare plants would be protected if any are found.

Conclusion

Selecting one of the parking lot relocation alternatives and restoring the current Twin Owls parking lot to natural conditions could result in a **minor benefit** to nesting Northern goshawks and peregrine falcon nesting habitat. Selecting Alternative 5 would continue to result in a **minor impact** nesting habitat for Northern goshawks and peregrine falcons. Selecting Alternatives 1, 2, 3, or 4B would result in **no impact** to threatened, endangered or rare species as result of parking lot, access road or trail construction. The parking lot as proposed in Alternative 4A would have a **minor impact** on Northern goshawk and peregrine falcon nesting habitat. The land exchange and the Black Canyon Trail realignment is expected to have **no impact** on threatened, endangered or rare species.

Because there would be no major, adverse impacts to threatened, endangered or rare species whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling legislation of RMNP; 2) key to the natural or cultural integrity of the Park; or 3) identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.6 Air Quality

Effects of the No Action Alternative

The No Action Alternative would not affect air quality. Negligible impacts to air quality would continue due to hydrocarbon emissions from vehicles and fugitive dust generated from the unpaved Twin Owls and Gem Lake parking lots. Because no construction is involved, there would be no air quality impacts related to construction.

Effects of the Parking Lot Relocation Alternatives

There would be no long-term increase in air pollution from the implementation of any of the alternatives. In the short-term if an alternative is adopted that requires road and parking lot construction, local air quality impacts may occur because of dust. Dust would be most prevalent if construction takes place during hot, dry, windy weather. The Alternative 1 site would have a moderate impact on nearby landowners during construction. Alternatives 2, 3 and 4 would have negligible impact on private landowners during construction but would have a minor impact on the MacGregor Ranch. Vehicle emissions from traffic entering and leaving any of the parking lot locations would be negligible and have no long-term impact on the park's Class I air quality.

Effects of the Land Exchange and Black Canyon Trail Realignment

There would be no long-term increase in air pollution as a result of the proposed land exchange or the realignment of a portion of the Black Canyon Trail.

Cumulative Effects

There would be no long-term cumulative increase in air pollution from the implementation of any of the alternatives.

Proposed Mitigation

During construction the surface of the access road and parking lot would be dampened during dry weather to mitigate dust impacts to nearby landowners. With the exception of Alternative 4, all access roads and parking lots as described in the relocation alternatives would be paved. Due to the expense, a portion of the access road for alternative 4 may not be paved. That portion of the road would be treated regularly with a dust palliative to minimize the generation of dust and to protect air quality.

Conclusion

All of the alternatives would have a **negligible impact** to air quality within RMNP both during the short-term and the long-term. Alternatives 1 and 2 would have a **minor impact** on air quality for nearby landowners during construction due to the generation of dust and emissions from construction equipment and **no impact** to air quality in the long-term. For Alternative 3 there would be a **minor impact** to air quality for the MacGregor Ranch, a **negligible impact** for nearby landowners during construction, and **no impact** over the long-term. Alternative 4 will have a **Minor impact** on air quality for the MacGregor Ranch and **No impacts** to nearby landowners during construction. Over the long-term, Alternative 4 will have **no impact** on air quality either for the MacGregor Ranch or nearby landowners. For Alternatives 3 and 4 the unpaved Gem Lake parking lot would remain in place, which would continue to create **Negligible impacts** to air quality for nearby landowners.

Because there would be no major, adverse impacts to air quality whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling legislation of RMNP; 2) key to the natural or cultural integrity of the Park; or 3) identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.7 Natural Soundscapes

Effects of the No Action Alternative

Traffic generated noise would continue to impact the MacGregor Ranch under the No Action Alternative. As the Ranch moves toward interpreting a time in history before the advent of the tractor, traffic generated noise would result in moderate impacts to the Ranch. No construction noise would be generated under the No Action Alternative.

Traffic generated noise and hikers on the Gem Lake Trail would continue to have a minor impact on landowners located near the Gem Lake parking lot and trail.

Effects of the Parking Lot Relocation Alternatives

For all of the relocation alternatives, there would be short-term noise impacts during construction, and long-term noise impacts from vehicles, hikers, and horseback riders who use the parking lot and trails. Table 7 identifies the anticipated noise impacts associated with the relocation alternatives.

Table 7 - Noise Impacts Associated with the Various Alternatives

Alternative	Parking Lot Noise Impact	Access Road Noise Impact	Trail Noise Impact
1	<ul style="list-style-type: none">+ Moderate benefit to the MacGregor Ranch with the closure of the Twin Owls parking lot.+ Noise impact would be eliminated for landowners near the Gem Lake trailhead.- Short-term minor construction noise impact to nearby landowners.- Long-term moderate noise impact to nearby landowners.	<ul style="list-style-type: none">+ Moderate benefit to the MacGregor Ranch with the closure of the access road to public use. NPS administrative and emergency use would be only source of noise.- Long-term moderate noise impacts to adjacent landowners.	<ul style="list-style-type: none">+ Minor benefit for nearby landowners with closure of the connecting trail from the existing Gem Lake trailhead.+ There would be negligible noise impacts to the MacGregor Ranch and adjacent landowners along the new connecting trail.

Alternative	Parking Lot Noise Impact	Access Road Noise Impact	Trail Noise Impact
2	<ul style="list-style-type: none"> + Moderate benefit to the MacGregor Ranch with the closure of the Twin Owls parking lot. + Noise impact would be eliminated for landowners near the Gem Lake trailhead. - Short-term minor construction noise impact to nearby landowners. - Long-term moderate noise impact to nearby landowners. - There could be possible moderate long-term impacts to nearby landowners if the two parcels of NPS land are transferred to MacGregor Ranch, sold and developed. 	<ul style="list-style-type: none"> + Moderate benefit to the MacGregor Ranch with the closure of the access road to public use. NPS administrative and emergency use would be only source of noise. - Long-term minor noise impacts to nearby landowners. 	<ul style="list-style-type: none"> + Closure of the connecting trail from the existing Gem Lake trailhead would eliminate hiker noise for nearby landowners. + There would be negligible noise impacts to the MacGregor Ranch along the new connecting trail. - There would be long-term moderate noise impacts to nearby landowners from hiker and horseback rider use of the new connecting trail.

Alternative	Parking Lot Noise Impact	Access Road Noise Impact	Trail Noise Impact
3	<ul style="list-style-type: none"> - Noise impact to the MacGregor Ranch would be transferred from the current Twin Owls parking lot to the entrance of the ranch. - Short-term minor construction noise impact to nearby landowners. - Long-term negligible noise impact to nearby landowners associated with the new parking lot. - There could be possible moderate long-term impacts to nearby landowners if the two parcels of NPS land are transferred to MacGregor Ranch, sold and developed. 	<ul style="list-style-type: none"> + Moderate benefit to the MacGregor Ranch with the closure of the access road to public use. NPS administrative and emergency use would be only source of noise. - Long-term minor noise impact to the museum area of the ranch from use of the access road at the entrance to the ranch. + Negligible noise impacts to adjacent landowners. 	<ul style="list-style-type: none"> + There would be minor noise impacts to the MacGregor Ranch along the new connecting trail. - There would be long-term moderate noise impacts to nearby landowners from hiker and horseback rider use of the new connecting trail.

Alternative	Parking Lot Noise Impact	Access Road Noise Impact	Trail Noise Impact
4	<ul style="list-style-type: none"> + Moderate benefit to the MacGregor Ranch with the closure of the Twin Owls parking lot. - Short-term minor construction noise impact to the MacGregor Ranch and climbers at the west end of Lumpy Ridge. - Long-term moderate noise impact to climbers at the west end of Lumpy Ridge + No noise impacts to nearby landowners associated with the new parking lot. - There could be possible moderate long-term impacts to nearby landowners if the two parcels of NPS land are transferred to MacGregor Ranch, sold and developed. 	<ul style="list-style-type: none"> + Moderate benefit to the MacGregor Ranch with the closure of the access road to public use. NPS administrative and emergency use would be only source of noise. - Short-term minor construction noise impact to the MacGregor Ranch and climbers at the west end of Lumpy Ridge. - Long-term moderate noise impact to climbers at the west end of Lumpy Ridge and the MacGregor Ranch. + No noise impacts to nearby landowners. 	<ul style="list-style-type: none"> + Negligible noise impacts to the MacGregor Ranch
5	<ul style="list-style-type: none"> - Moderate noise impacts to the MacGregor Ranch Historic District would remain unchanged from current conditions. 	<ul style="list-style-type: none"> - Moderate noise impacts to the MacGregor Ranch Historic District would remain unchanged from current conditions. 	<ul style="list-style-type: none"> + No new trail would be needed.

Although there is no quantitative data, experience would indicate that the majority of vehicles would access the trailhead in the morning and exit in the afternoon. A smaller amount of traffic would access the trailhead and leave during the middle of the day. For any alternative, there would be some traffic entering or leaving after dark or during the early morning hours. There would occasionally be overnight parking for those visitors who are camping in the backcountry, but no camping would be allowed at any parking lot.

Effects of the Land Exchange and Black Canyon Trail Realignment

The 70-acre parcel in the Black Canyon area to be transferred from RMNP to the MacGregor Ranch was used continuously by the Ranch for ranch purposes from the late 1800's until January, 2001. The return of this acreage to the MacGregor Ranch would not result in any new impacts to the natural soundscape. Approximately 9 acres located just west of the existing Twin Owls parking lot would be transferred from RMNP to the MacGregor Ranch. The Ranch has not used this area in the past. Ranching activities are expected to have a negligible impact on the natural soundscape.

As part of the land exchange, the MacGregor Ranch would transfer to RMNP between 100 and 115 acres that have previously been available for ranching activities. As a result, RMNP would acquire more acreage than it is giving up. RMNP would protect the natural soundscape to the extent possible while fulfilling our mission to allow freest possible use of park resources for recreational purposes.

If Alternative 2, 3, or 4 is selected, RMNP would transfer to the MacGregor Ranch the 10.04 and 1.48-acre parcels acquired from the Ranch in 1983. The possible sale and development of these parcels could result in a moderate impact to the natural soundscape for nearby landowners. Those impacts would not affect the natural soundscape within the park itself.

The realignment of the Black Canyon Trail would have no effect on the natural soundscape because the existing portion of the Black Canyon Trail to be realigned is located in the same vicinity as the proposed new trail.

Cumulative Impacts

Implementation of other construction-related projects within RMNP would create similar soundscape impacts during the construction phase. These impacts, when combined with the proposed project, would result in negligible cumulative effects because the impacts are transitory. Because the current Twin Owls parking lot is located within RMNP, there would be only minor additional natural soundscape impacts to the park if one of the relocation alternatives is selected. This minor impact is due to the increased size of the parking lot that would facilitate more visitor use.

Proposed Mitigation

To minimize impacts to the natural soundscape, construction of a new parking lot and access road would be done during the fall, winter or spring when nearby seasonal residences are vacant. Preserving existing vegetation and the existing topography to the extent possible would minimize noise. Constructing earth berms and planting additional vegetation would further reduce noise.

Conclusion

Please refer to Table 7 for a summary of the noise and soundscape impacts that are associated with the various alternatives.

Because there would be no major, adverse impacts to the natural soundscape whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling

legislation of RMNP; 2) key to the natural or cultural integrity of the Park; or 3) identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.8 Lightscape Management

Effects of the No Action Alternative

Vehicle lights at the Twin Owls parking lot and on the access road would continue to have a minor impact on the historic ambiance of the MacGregor Ranch. Vehicle lights would continue to have a minor impact on landowners located near the Gem Lake parking lot.

Effects of the Parking Lot Relocation Alternatives

No light fixtures would be installed at any of the alternative parking lot locations or along any of the proposed access roads. Table 8 identifies the anticipated light and glare impacts associated with the No Action alternative as well as the relocation alternatives.

Table 8 - Light and Glare Impacts Associated with the Various Alternatives

Alternative	Parking Lot Light & Glare Impact	Access Road Light & Glare Impact
1	<ul style="list-style-type: none"> + Minor benefit to the MacGregor Ranch with closure of the existing Twin Owls parking lot. Impacts to the museum area of the MacGregor Ranch from headlights and sunlight reflecting off vehicles is eliminated except for NPS administrative and emergency use. - Long-term minor impact to nearby landowners from headlights. Impact is transitory. 	<ul style="list-style-type: none"> + Minor benefit to the MacGregor Ranch with the elimination of public use of the current access road through the Ranch. NPS administrative and emergency use would be only source of headlight impact. - Long-term moderate impact to nearby landowners from headlights. Impact is transitory.

Alternative	Parking Lot Light & Glare Impact	Access Road Light & Glare Impact
2	<ul style="list-style-type: none"> + Minor benefit to the MacGregor Ranch with closure of the existing Twin Owls parking lot. Impacts to the museum area of the MacGregor Ranch from headlights and sunlight reflecting off vehicles is eliminated except for NPS administrative and emergency use. - Long-term minor impact to nearby landowners from headlights and reflected sunlight off vehicles. Impact is transitory. - There could be possible moderate long-term impacts to nearby landowners from interior and exterior lighting if the two parcels of NPS land are transferred to MacGregor Ranch, sold and developed. 	<ul style="list-style-type: none"> + Minor benefit to the MacGregor Ranch with the elimination of public use of the current access road through the Ranch. NPS administrative and emergency use would be only source of headlight impact. - Long-term minor impact to nearby landowners from headlights. Impact is transitory.
3	<ul style="list-style-type: none"> - Impacts to the MacGregor Ranch from headlights and sunlight reflected off vehicles would be transferred from the current Twin Owls parking lot to the entrance of the ranch. Impact is transitory - Long-term minor impact to nearby landowners from headlights and reflected sunlight off vehicles. Impact is transitory. - There could be possible moderate long-term impacts to nearby landowners from interior and exterior lighting if the two parcels of NPS land are transferred to MacGregor Ranch, sold and developed. 	<ul style="list-style-type: none"> + Impacts to the museum area of the MacGregor Ranch from headlights is greatly reduced except for NPS administrative and emergency use. + Long-term negligible impact on nearby landowners from headlights.

Alternative	Parking Lot Light & Glare Impact	Access Road Light & Glare Impact
4	<ul style="list-style-type: none"> + Minor benefit to the MacGregor Ranch with closure of the existing Twin Owls parking lot. Impacts to the museum area of the MacGregor Ranch from headlights and sunlight reflecting off vehicles is eliminated except for NPS administrative and emergency use. - Moderate impact to MacGregor Ranch Forman's home from headlight glare. - There would be a minor impact to rock climbers from sunlight reflecting off vehicles. Impact is transitory. + There would be no impacts to nearby landowners from the new parking lot. - There could be possible moderate long-term impacts to nearby landowners from interior and exterior lighting if the two parcels of NPS land are transferred to MacGregor Ranch, sold and developed. 	<ul style="list-style-type: none"> + Minor benefit to the MacGregor Ranch with the elimination of public use of the current access road through the Ranch. NPS administrative and emergency use would be only source of headlight impact. - There would be a minor impact to the MacGregor Ranch from headlights, particularly at the Ranch Foreman's house. Impact is transitory.
5	<ul style="list-style-type: none"> - Minor impacts to the MacGregor Ranch from headlights and sunlight reflected off vehicles from the existing Twin Owls parking lot would remain unchanged. 	<ul style="list-style-type: none"> - Minor impacts to the museum area of the MacGregor Ranch from the headlights of vehicles using the existing access road would remain unchanged.

Effects of the Land Exchange and Black Canyon Trail Realignment

The 70-acre parcel in the Black Canyon area to be transferred from RMNP to the MacGregor Ranch was used continuously by the Ranch for ranch purposes from the late 1800's until January 2001. The return of this acreage to the MacGregor Ranch would not result in any new impacts to the natural lightscape. Approximately 9 acres located just west of the existing Twin Owls parking lot would be transferred from RMNP to the MacGregor Ranch. The Ranch has not used this area in the past. Ranching activities are expected to have a negligible impact on the natural lightscape.

As part of the land exchange, the MacGregor Ranch would transfer to RMNP between 100 and 115 acres that have previously been available for ranching activities. As a result, RMNP would acquire more acreage than it is giving up. RMNP would protect the natural lightscape to the extent possible while fulfilling our mission to allow freest possible use of park resources for recreational purposes.

If Alternative 2, 3, or 4 is selected, RMNP would transfer to the MacGregor Ranch the 10.04 and 1.48-acre parcels acquired from the Ranch in 1983. The possible sale and development of these parcels could result in a moderate impact to the natural lightscape for nearby landowners. Those impacts would not affect the natural lightscape within the park itself.

The realignment of the Black Canyon Trail would have no effect on the natural lightscape because the existing portion of the Black Canyon Trail to be realigned is located in the same vicinity as the proposed new trail.

Cumulative Impacts

The cumulative effects associated with vehicle headlights and sunlight reflected off vehicles is considered minor to moderate.

Proposed Mitigation

Preserving existing vegetation and the existing topography to the extent possible would minimize reflected sunlight and the light from headlights. Constructing earth berms and planting additional vegetation would further reduce reflected sunlight and the light from headlights.

Conclusion

Please refer to Table 8 for a summary of the light and glare impacts that are associated with the various alternatives.

Because there would be no major, adverse impacts to the natural lightscape whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling legislation of RMNP; 2) key to the natural or cultural integrity of the Park; or 3) identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.9 Wilderness

Effects of the No Action Alternative

Under the No Action Alternative there would be no new impacts to wilderness.

Effects of the Parking Lot Relocation Alternatives

None of the parking lot relocation alternatives are located in recommended wilderness. The Alternative 4A parking lot is located in potential wilderness. However, because the land exchange associated with Alternative 4A would transfer 65 to 70 acres of irrigated and dryland pasture to the MacGregor Ranch in the vicinity of the proposed parking lot, the Potential Wilderness designation would be removed from this area.

All of the relocation alternatives propose to increase the number of parking spaces and provide improved vehicular access. For this reason, visitor use may increase in potential or recommended wilderness in the Lumpy Ridge, Black Canyon and Gem Lake areas. At the present time, limited parking and the fence along the access road to the Twin Owls parking lot is controlling use.

It should be noted that providing additional parking spaces may not necessarily result in increased use on busy days because it is estimated that about 100 vehicles are already parking at Twin Owls and Gem Lake parking lots and along Devils Gulch Road. Prior to construction of a fence along the access road to the Twin Owls parking lot, vehicles would park along the road on MacGregor Ranch property. During the summer of 1999, MacGregor Ranch documented that as many as 60 vehicles per day would park along the access road when the Twin Owls parking lot was full (Eric Adams, personal communication). Also on busy days, additional vehicles would park along Devil's Gulch road. The fence that was erected along both sides of the access road in 1999 has prevented any off-road parking on MacGregor Ranch. Overflow parking is now occurring along Devil's Gulch Road.

Given the current situation, providing additional parking spaces and improved access may meet the current demand, and therefore may not result in increased use in potential or recommended wilderness on busy days. However, with some alternatives, access to named rock formations would take longer which may lead climbers to seek other venues that do not take as long to reach. This may result in increased climbing demand elsewhere in the park, with associated impacts to wilderness.

The Alternative 4 parking lot location at the west end of the MacGregor Ranch would result in noise and visual intrusion on potential and recommended wilderness and on the wilderness experience of climbers on the west end of Lumpy Ridge.

Visitation to Gem Lake, which is located within recommended wilderness, could increase or decrease depending on which alternative is implemented and if the hiking distance increases or decreases. The hiking distance from the existing Gem Lake parking lot to Gem Lake would be shortened by about 0.3-mile if a parking lot is constructed at the Alternative 1 location. The distance could increase by as much as 0.36- mile if Alternative 3 is implemented and the existing Gem Lake parking lot is closed.

With the construction of a new parking lot, parking and maneuvering space for horse trailers would be provided. Therefore, horse use in the area may increase. Trail corridors used by horses can become conduits for the introduction of invasive exotic plants, which in turn would impact potential or recommended wilderness (Benninger 1992, McLendon 1996).

Effects of the Land Exchange and Black Canyon Trail Realignment

The proposed land exchange between the MacGregor Ranch and RMNP would result in a net gain of land (ranging from 86 to 102 acres) that can become recommended wilderness within RMNP.

With the proposed land exchange, RMNP would transfer to the MacGregor Ranch approximately 9 acres of land located west of the Twin owls parking lot that is currently in recommended wilderness. With the transfer, the recommended wilderness designation would be removed from this acreage. However, this area would be protected by a conservation easement. In addition, the potential wilderness designation would be removed from the 70 acres of dryland and irrigated pasture that is proposed to be transferred from RMNP to the MacGregor Ranch. This acreage would also be protected by a conservation easement.

The MacGregor Ranch is not within recommended or potential wilderness. Therefore, those portions of the existing Black Canyon Trail that cross the MacGregor Ranch are located outside of recommended or potential wilderness. Just west of the current Twin Owls parking lot, the existing Black Canyon Trail runs along the edge of recommended wilderness for a distance of about 750 feet. When the existing Black Canyon Trail re-enters the park, it passes through potential wilderness for a distance of about 1.65 miles before entering recommended wilderness.

From east to west, the proposed Black Canyon Trail realignment would pass through recommended wilderness for a distance of about 2,000 feet. Where the proposed Black Canyon Trail realignment crosses recommended wilderness, it is located in Management Class 4. The Backcountry/Wilderness Management Plan (2001) states that this management class generally includes formal trail corridors (200 feet on either side of trail). Therefore, the proposed realignment is compatible with the recommended wilderness designation.

Cumulative Effects

There is currently no designated wilderness in RMNP in the vicinity of the MacGregor Ranch. Potential wilderness is located in the Black Canyon area, and recommended wilderness is located immediately north of the MacGregor Ranch. The MacGregor Ranch itself is not being recommended for wilderness designation.

The existing Twin Owls and Gem Lake parking lots have a combined capacity of about 48 vehicles. During the summer of 1999 MacGregor Ranch documented that as many as 60 vehicles per day were parking along the access road when the Twin Owls parking lot was full (Eric Adams, personal communication). The amount of available parking, including overflow parking, has defined the amount of visitor use that has been occurring in recommended and potential wilderness areas located north of MacGregor Ranch.

The only other trailhead that provides direct access to recommended and potential wilderness in the Gem Lake and Black Canyon areas is located at McGraw Ranch. By agreement with the McGraw Ranch Road Association, parking at McGraw Ranch for visitor use is limited to 15 vehicles and 1 horse trailer. RMNP has also agreed that it will not promote increased public use of the McGraw Ranch area.

No other improvements are planned that would increase wilderness use or impacts in the Gem Lake and Black Canyon areas. The incremental impact on wilderness from the

parking lot relocation alternatives, in addition to past and future impacts, would be a minor cumulative impact.

Conclusion

There is no designated wilderness in the vicinity of the parking lot relocation alternatives so there will be **no impact on designated wilderness**. Recommended wilderness and potential wilderness are located immediately north of the MacGregor Ranch. Relocating the Twin Owls and Gem Lake parking lots is expected to have a **minor impact** on recommended or potential wilderness within RMNP due to increased visitor use because of greater parking capacity. With the proposed land exchange, between 86 and 102 acres of land could be added to recommended wilderness and approximately 70 acres would be removed from the potential wilderness designation. The additional acres added to recommended wilderness would result in a **minor benefit** to wilderness within RMNP. The proposed Black Canyon Trail realignment will cross recommended wilderness, but it will have a **minor impact** on wilderness because it is located in Management Class 4 where formal trail corridors are permitted.

Because there would be no major, adverse impacts to wilderness whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling legislation of RMNP; 2) key to the natural or cultural integrity of the Park; or 3) identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.10 Cultural Resources

In the National Historic Preservation Act (NHPA), Congress established a comprehensive program to preserve the historical and cultural foundations of the Nation as a living part of community life. Section 106 of the NHPA requires Federal agencies to take into account the effects of their actions on properties listed or eligible for listing on the National Register of Historic Places. A project is considered to adversely affect a historic property if it alters the characteristics that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property. Integrity is the ability of a property to convey its significance, based on its location, design, setting, materials, workmanship, feeling, and association.

Adverse effects can be direct or indirect. Typical examples of adverse effects are:

- Physical destruction or damage.
- Alteration inconsistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.
- Change in the character of the property's use or setting.
- Introduction of incompatible visual, atmospheric, or audible elements.

No adverse effect means there could be an effect, but the effect would not be harmful to those characteristics that qualify the resource for inclusion on the National Register. Adverse effect means the effect could diminish the integrity of the characteristics that qualify the resource for the National Register.

Effects of the No Action Alternative

The MacGregor Ranch is listed on the National Register of Historic Places (NR89001008 - State site No. 5LR807). It was listed on the National Register on July 31, 1989. The Twin Owls trailhead and parking lot had been in existence for at least 10 years prior to the National Register listing, and they did not prevent the Ranch from being listed. Therefore, there can be no finding of adverse effect under Section 106 of the NHPA due solely to the existence of the Twin Owls parking lot and use of the access road through the Ranch.

However, continuing use of the existing Twin Owls parking lot, and especially the access road to the parking lot, is impacting the MacGregor Ranch. The present access road to the Twin Owls parking lot goes through a portion of the ranch where many of the structures that contribute to the MacGregor Ranch Historic District are located. Long Hoeft Architects completed an architectural assessment in 1993. They concluded, "the paved road cutting through the site is disturbing and clearly a threat to the ranch buildings and equipment." The structures and museum collections are at risk from vibration and dust from constant traffic.

One of the goals of the MacGregor Ranch Trustees is to operate the Ranch as it might have existed prior to the advent of the tractor. Continuing motor vehicle use of the existing Twin Owls parking lot and access road runs counter to the future goals of the MacGregor Ranch Trustees.

Effects of the Parking Lot Relocation Alternatives

All of the relocation alternatives would remove all but NPS administrative and emergency vehicle access from the museum area of the ranch, which would have a moderate beneficial impact on the cultural resources of the MacGregor Ranch. Alternatives 2, 3 and 4 place the parking lot, access road and connecting trail elsewhere on the MacGregor Ranch.

Alternative 1 would result in the least impact to cultural resources on the MacGregor Ranch. This site has been surveyed for archeological resources, and none were found.

The privately owned Wind Ridge property is adjacent to the Alternative 1 site. The NPS learned in February 2002 that this property has been determined eligible for listing on the National Register of Historic Places (State site No. 5LR10348). The proposed parking lot associated with Alternative 1 will not be visible from Wind Ridge and will have no effect on the property. The access road for Alternative 1 would be located approximately 225 feet west of the Wind Ridge cottage and portions of the road would be visible from the property. The NPS has initiated formal consultation with the State Historic Preservation Officer (SHPO) regarding the potential effect of the road on the Wind Ridge property.

Alternative 2 is located in a meadow that is dotted with ponderosa pine trees. The MacGregor Ranch currently owns this site, which is part of the MacGregor Ranch Historic District. Portions of the parking lot and access road would likely be visible from the A.Q. MacGregor house, which is a contributing structure to the MacGregor Ranch Historic District. It would also be visible from Devils Gulch Road and surrounding

properties. Approximately 5 acres would be transferred to RMNP for construction of the parking lot and access road if this alternative is selected. This acreage would no longer be available for ranching purposes and the parking lot, access road and connecting trail would have a minor impact on the cultural integrity of the ranch.

Alternative 3 is located in an open meadow just inside the main entrance to the MacGregor Ranch. This site is also located within the MacGregor Ranch Historic District. The existing access road to the Ranch would provide access to the parking lot. The parking lot would be visible from Devils Gulch Road, and would have a moderate impact on visitor's first impressions of the Ranch. It is this first view of the Ranch that the MacGregor Ranch Trustees want to preserve as a "Window to the Past." This is a primary reason why the Ranch is opposed to this alternative. This alternative would have a moderate impact on the cultural integrity of the Ranch.

Alternative 4 is located in a sparsely treed meadow at the west end of the MacGregor Ranch. The parking lot could be located either inside RMNP, or on property owned by the MacGregor Ranch. If the parking lot is located on MacGregor Ranch property, it will be within the MacGregor Ranch Historic District. The only access to this site is via a 1.35-mile road that passes entirely through Ranch property. The road would have to be widened to accommodate 2-way traffic, and it would be visible from various locations throughout the ranch. It is very likely that fencing would be installed along both sides of the access road to prevent visitors from trespassing on the Ranch and to keep cattle from wandering onto the road. The access road also passes by the Ranch Foreman's house, which is listed on the National Register of Historic Places as a contributing structure. Because of the impacts associated with the access road, this alternative would have a moderate impact on the cultural integrity of the Ranch.

Effects of the Land Exchange and Black Canyon Trail Realignment

The land exchange would secure additional dryland and irrigated pasture for MacGregor Ranch livestock – land that was available to the ranch when it was first homesteaded in 1873. The additional acreage would help to secure the future of the Ranch, and would have a moderate beneficial impact on preserving the cultural integrity of the Ranch.

Realigning the Black Canyon Trail would have no impact to known cultural resources within RMNP.

Cumulative Effects

Residential development in the vicinity of the MacGregor Ranch and increased visitor use of the Twin Owls parking lot has impacted the historical integrity of the MacGregor Ranch. By acquiring a conservation easement on 1,221 acres of the MacGregor Ranch in 1983, the NPS was able to assist with the preservation of the Ranch and the maintenance of its historical integrity. The NPS has no other future development plans for this area that would contribute to cumulative impacts to the cultural integrity of the Ranch.

Proposed Mitigation

Additional trees and shrubs would be planted for screening purposes if any of the relocation alternatives are selected. For Alternative 1 these plantings will be done to

further screen the parking lot and access road from adjoining and nearby landowners. For Alternatives 2 or 3, these plantings would be done to screen the parking lot and access road from the MacGregor Ranch Historic District and Devils Gulch Road.

If the Wind Ridge property is listed on the National Register of Historic Places, the NPS will consult with the SHPO to determine if the access road for Alternative 1 will have an adverse effect on the property and what mitigation measures will be required.

Should any previously undiscovered archeological resource be discovered during construction, work would be stopped in the area of the discovery and the Park archeologist would be contacted to assess the value of the find prior to resumption of the activity. If a significant cultural resource were discovered, the Park would consult with the SHPO/Tribal Historic Preservation Officer, and the Advisory Council on Historic Preservation, as necessary. Park staff would ensure that any personnel doing the construction are informed of the procedures to follow in case previously unknown archeological sites are uncovered. There are penalties for illegally collecting artifacts or intentionally damaging archeological resources.

Conclusion

Selecting the No Action Alternative would result in continued **moderate impacts** to the cultural resources on the MacGregor Ranch **but does not affect the National Register status of the Ranch**. All of the relocation alternatives would remove all but NPS administrative and emergency vehicle access from the museum area of the ranch, which would be a **moderate benefit** to the cultural resources of the MacGregor Ranch. Alternatives 2, 3 and 4 place the parking lot, access road and connecting trail elsewhere on the MacGregor Ranch with varying degrees of impact to cultural resources. Alternative 2 would have a **minor impact**, and Alternatives 3 and 4 would have a **moderate impact** on cultural resources associated with the MacGregor Ranch. The proposed land exchange would help to secure the future of the Ranch, and would result in a **moderate benefit** toward preserving the cultural integrity of the Ranch. Realigning the Black Canyon Trail would have **no impact** on known cultural resources.

Because there would be no major, adverse impacts to cultural resources whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling legislation of RMNP; 2) key to the natural or cultural integrity of the Park; or 3) identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.11 Visitor Use

Effects of the No Action Alternative

Many visitors, especially senior citizens and rock climbers, appreciate the convenience of the existing Twin Owls parking lot because it provides easy access to good hiking trails and rock climbing routes and offers spectacular vistas of Longs Peak. In the event of an emergency, a hiker can reach the parking lot fairly quickly from popular rock climbing areas and other backcountry locations. However, the popularity of the area reached a point where overflow parking and traffic on the access road created serious problems for

the MacGregor Ranch. Visitors often encounter congestion and at times find no place to park when they arrive at the Twin Owls parking lot. The existing Twin Owls and Gem Lake parking lots are not paved or striped for efficient parking and maneuvering of vehicles. Neither parking lot makes specific provision for vehicles pulling trailers.

When the NPS did not move forward with the relocation of the parking lot as expeditiously as the MacGregor Ranch Trustees would have liked, they took matters into their own hands in 1999 and erected a fence along both sides of the access road to prevent visitor trespass. The fencing has been placed at the limits of the historic access width, which only accommodates one lane of traffic. A few wide spots have been established where two vehicles traveling in opposite directions can pass each other. However, the single lane width and the constraints imposed by the fencing has resulted in accidents. At best the fencing and the narrow road are an inconvenience to park visitors, and at worst it could impede the response time of emergency vehicles.

Visitor use and experience and emergency response would remain unchanged if the No Action Alternative is selected.

Effects of the Parking Lot Relocation Alternatives

Sightseeing and picnicking. Some visitors use the current Twin Owls parking lot just for sightseeing and picnicking from their vehicles. With the parking lot relocation alternatives, these activities can still take place, but visitors who are unable to walk to the Twin Owls area would be unable to view the spectacular scenery that is available at the current parking lot. Loss of this visitor activity is expected to have a moderate impact on visitor use.

Parking. All of the relocation alternatives propose the development of improved parking, access and vehicular circulation. A new parking lot would double the number of parking spaces when compared with the existing capacity of the parking lots at Twin Owls and Gem Lake. However, this increase is not expected to greatly exceed the current demand, which is being fulfilled by overflow parking. Some of the overflow parking that is presently taking place along Devils Gulch Road is creating a safety problem for park visitors and vehicles traveling on this narrow, two-lane county road. A new parking lot with adequate capacity would help to alleviate this problem, and ease of access and defined parking spaces would contribute to a positive experience for park visitors.

Equestrian Use. All the relocation alternatives would safely accommodate vehicles towing horse trailers and would improve equestrian opportunities. Connecting trails from all of the alternative trailhead locations can provide safe equestrian access to the park.

The Black Canyon Trail is currently unavailable to commercial livery unless trailers are used to transport horses to the current Twin Owls Trailhead. With all of the parking lot relocation alternatives, commercial livery (e.g., Silver Lane Stables) will have access to the Black Canyon Trail without the need to transport horses.

The first 1/3-mile of the Gem Lake Trail is proposed to be closed and restored if Alternatives 1 or 2 is selected. However, this section of trail crosses private land, and the affected landowners would be consulted to determine if the trail should be closed. A local concessionaire that offers horseback rides into RMNP is currently using this trail. If it is determined that the first portion of the Gem Lake Trail is to be closed, horseback riders from Silverlane Stables would need an alternative means of accessing trails within the park. This could be accomplished by constructing a trail directly across Devils Gulch Road from the local trail known as Otie's Trail.

At present there are two means of accessing Gem Lake from the south. One access is via the existing Gem Lake parking lot, and the other is via the existing Twin Owls parking lot. The concessionaire that offers horseback rides into RMNP only uses the existing Gem Lake trailhead for access. Because many hikers use the other means of access, hiker/horse conflicts are reduced. If any of the parking lot relocation alternatives is selected there would only be one direct means of accessing Gem Lake, and horse/hiker conflicts would increase.

Winter Use. Snow removal can be accomplished relatively easily at the Alternative 1, 2 and 3 locations. Alternatives 2 and 3 have short access roads and are situated in sunny locations where solar gain would help to keep the facilities free of snow. The access road to the Alternative 1 parking lot is 1/3-mile long. The south one-third of the access road is located in an open meadow with a south-facing slope. Solar gain would help to keep this portion of the road free of snow. The northern two-thirds of the access road passes through a grove of mature ponderosa pine trees that would shade portions of the road during the winter. Keeping the parking lot and access road free of snow would be more difficult at the Alternative 1 site than at the Alternative 2 or 3 sites.

Snow removal to provide wintertime access to the Alternative 4 parking lot would be more expensive than for the other alternatives. The access road is 1.35 miles long, and portions of the road are situated on a north-facing slope where there is little solar gain during the winter. Other portions of the road traverse an open meadow where blowing and drifting snow is expected to be a problem. Because of the expense involved in keeping the access road open, the road may be closed to vehicular access during the winter months. Winter use and visitor experience could be adversely impacted if Alternative 4 is selected.

Hiking and Climbing Access. Although there has never been an accurate count, some estimates place rock climbing use of Lumpy Ridge at 16,000 visits per year. In 1999 the Colorado Mountain School had 732 visitor days at Lumpy Ridge. The development of a new parking lot at the Alternative 1 location and closure of the Twin Owls parking lot would add a 0.7-mile hike to some of the most popular technical rock climbing routes in the park. It is anticipated that it would take most hikers and climbers about 20 minutes to walk this trail one-way. Because the proposed trail would pass through some very scenic terrain, some visitors would enjoy this new opportunity. However, for climbers, the increased distance and lost time would have a minor negative impact on their experience. From the Alternative

1 location the hike to Gem Lake is 0.3 miles shorter each way. For some visitors, the shorter distance would enhance their experience.

Alternative 1 would probably increase the use of the named climbing routes east of Twin Owls, which include the named rock formations, “Out West Crag”, “Crescent Wall”, “Triangle Rock”, and “Gollum’s Arch Rock.” It would also create an increase in “bouldering” around the parking lot where some rocky outcrops exist. Some climbers historically have driven to the Twin Owls parking lot during lunch or after work to do short climbs. The opportunity for short climbs would be lost in the area around Twin Owls rock formation if the parking lot is closed and climbers do not have the time to walk the added distance. Improved access to other rock formations that have previously not been available may offset this loss.

The development of a new parking lot at the Alternative 2 location would add a 1.2 mile hike to some of the most popular technical rock climbing routes in the Lumpy Ridge Area. It is anticipated that it would take most hikers and climbers about 35 minutes to walk this trail one-way. For climbers, the increased distance and lost time would have a moderate negative impact on their experience. Despite objections from the MacGregor Ranch, it is likely that visitors will create a shortcut through the Ranch to reach popular climbing and hiking destinations within the park. From the Alternative 2 location the hike to Gem Lake is 0.1 mile longer each way. This would have a negligible impact on visitor experience.

The development of a new parking lot at the Alternative 3 location would add a 1.5 mile hike to some of the most popular technical rock climbing routes in the Lumpy Ridge Area. It is anticipated that it would take most hikers and climbers about 45 minutes to walk this trail one-way. For climbers, the increased distance and lost time would have a moderate negative impact on their experience. Despite objections from the MacGregor Ranch, it is likely that visitors will create a shortcut through the Ranch to reach popular climbing and hiking destinations within the park. From the Alternative 3 location the hike to Gem Lake is 0.6 mile longer each way. This would have a moderate impact on visitor experience. For this reason, if Alternative 3 is selected, it is anticipated that the current Gem Lake parking lot would remain, which would have no impact on visitor experience.

The development of a new parking lot at the Alternative 4 location would make climbing routes at the west end of Lumpy Ridge, such as “The Book”, “Sundance”, “The Pear” and “Needles” much more accessible to climbers. The distance to these climbing routes would be as much as 0.5 mile shorter than the distance from the existing Twin Owls parking lot via the Black Canyon Trail. This would result in a moderate benefit for most climbers. However, the distance from the Alternative 4 parking lot to the Twin Owls Rock formation would increase by 1.25 miles. For some climbers, the increased distance and lost time to Twin Owls would have a moderate negative impact on their experience. From the Alternative 4 location the hike to Gem Lake would also be 1.25 miles longer than the hike would be from the Twin Owls parking lot. For this reason, if Alternative 4 is selected, it is anticipated

that the current Gem Lake parking lot would remain, which would have no impact on visitor experience.

Emergency Response. For any of the relocation alternatives, emergency vehicles will have ready access to the trailhead. With all of the relocation alternatives, the current Twin Owls parking lot would be closed and the area restored. The access road would remain available for emergency use, and the response time for emergency equipment is expected to improve because there would be no park visitor traffic on the road to impede emergency response. All other roads in the area, including the Black Canyon access road, would also be available for emergency response.

For Alternatives 1, 2, and 3, the overall emergency response time would suffer because a hiker would have to travel further to reach the parking lot to report an accident. For Alternative 4, emergency response time may slightly improve because of the proximity of the proposed parking lot to popular rock climbing routes.

MacGregor Ranch Visitor Experience and Pedestrian Safety. All of the relocation alternatives would enhance the experience for MacGregor Ranch visitors. There would be a moderate beneficial impact to pedestrian safety at the Ranch if the Twin Owls parking lot is relocated and visitor use of the access road is terminated.

The Alternative 1 parking lot location is not visible from the museum area of the Ranch, and the visual intrusion of a parking lot would be eliminated. This would have a beneficial effect on visitor experience.

The Alternative 2 parking lot location is not visible from the museum area of the Ranch, but would be visible from the A. Q. MacGregor house, which is used by the Ranch for environmental education. Preserving the visual integrity of the Ranch would have a beneficial effect on visitor experience.

Alternative 3 places the parking lot near the main entrance to the Ranch. The parking lot would be visible from the museum area of the Ranch and would therefore have a negative impact on visitor experience. The removal of vehicular traffic from the museum area of the Ranch and removal of the Twin Owls parking lot offset this negative impact.

The Alternative 4 parking lot would not be readily visible from the museum area of the ranch. The access road would be visible from the museum area of the Ranch, and numerous park visitors would use this road every day to access the parking lot. The access road would have a moderate negative impact on visitor experience at the MacGregor Ranch. The removal of park visitor traffic from the museum area of the Ranch and removal of the Twin Owls parking lot offset this negative impact.

Wilderness. The presence of visitors and park staff in wilderness results in unavoidable adverse impacts on several critical wilderness values, especially solitude. Camping and hiking, climbing activities, and performing trail work in

wilderness can all result in visual and noise intrusions and can negatively affect visitor experience, especially if litter or other indications of use are left behind.

Because the relocation alternatives provide increased parking capacity, an increase in wilderness use is anticipated. This increase is expected to have a minor impact on the experience of park visitors in wilderness areas.

Effects of the Land Exchange and Black Canyon Trail Realignment

With the proposed land exchange, 84 to 100 acres located in the northeast corner of the MacGregor Ranch would be transferred to RMNP. Some rock outcrops and cliffs in this area may have unclimbed routes that would become popular. There would also be opportunities for “bouldering” in this area. These activities would enhance the experience of rock climbers.

The Black Canyon Trail realignment would be more strenuous than the existing trail. The proposed realigned trail has steeper grades than the existing trail. This new section of trail would have a minor impact on the general public, and a moderate impact on trail users who preferred the more gentle grades of the existing trail.

The park offers guided bird walks that begin at the Twin Owls parking lot and follow the Black Canyon Trail. If one of the relocation alternatives is selected, this guided walk would completely change. The walk would start at the new parking lot location (whether Alternative 1, 2, 3, or 4) and would follow the connecting trail into the park. The best raptor viewing opportunities are located west of the current Twin Owls parking lot. Some visitors may be discouraged from attending guided bird walks because of the added distance required before reaching good raptor viewing areas.

There would be birding opportunities (for birds other than raptors) along the connecting trails as proposed for the various parking lot relocation alternatives. However, the guided walk would probably change from an easy walk to a moderately strenuous hike with the implementation of one of the relocation alternatives. A more strenuous hike would have a moderate impact on some park users.

Cumulative Impacts

The visitor experience at the Twin Owls trailhead has changed very little over the course of 30 years. The most notable changes have been the increase in visitor use, and the erection of fencing on both sides of the access road leading to the Twin Owls parking lot, which has impeded traffic flow. No other Federal projects are being considered for the MacGregor Ranch area that would create cumulative impacts to visitor experience. The MacGregor Ranch Trustees have a goal to operate the Ranch as it might have existed prior to the advent of the tractor. Such a return to the days of yesteryear would have a moderate beneficial effect on MacGregor Ranch and RMNP visitors.

Proposed Mitigation

If Alternative 1, 2 or 3 is selected, an equestrian trail would be provided directly across Devils Gulch Road from the local equestrian trail known as Otie’s Trail so that horseback riders can reach trails in RMNP.

The parking lot and access road for relocation alternatives 2, 3 and 4 would be visible to MacGregor Ranch visitors from various important vantage points. To protect the visual integrity of the MacGregor Ranch and the experience of visitors to the Ranch, trees and shrubs would be planted along the access road and around the parking lot to provide visual screening.

If any of the parking lot relocation alternatives is implemented, the hiking distance to the trailhead from within the park could increase, which would adversely affect emergency response time. A telephone for emergency use would be installed at the site of the current Twin Owls parking lot if one of the parking lot relocation alternatives were selected.

Conclusion

Selecting the No Action Alternative would continue to result in a **moderate impact** for visitors who must use the constricted access route through the MacGregor Ranch and who encounter inadequate parking capacity, lack of parking for vehicles towing trailers, inadequate room for vehicular circulation and inadequate emergency access. The No Action Alternative will continue to have a **minor impact** on commercial liveries that do not have direct access to the Black Canyon Trail.

The parking lot relocation alternatives would result in a **moderate impact** to sightseers, picnickers and birders due to the loss of vehicular access to spectacular scenery and wildlife viewing located at the current Twin Owls parking lot. Alternative 4 could result in **moderate impacts** to visitors who may not be able to access the area when there are adverse weather conditions during the winter months. Most park visitors will experience **moderate benefits** because of improved access for vehicles, increased parking capacity, parking for vehicles towing trailers, ease of circulation within the parking lot, improved emergency access and new hiking and “bouldering” opportunities. All of the parking lot relocation alternatives would likely result in increased horse/hiker conflicts, which would be a **minor impact**. Alternative 1 would have a **minor impact** on hikers and rock climbers who must walk 0.7-mi. to the Twin Owls, and a **minor benefit** because of the shorter hike to Gem Lake. Alternative 2 would have a **minor impact** on hikers and rock climbers who must walk 1.2-mi. to Twin Owls. Alternative 3 would have a **moderate impact** on visitors and rock climbers who must walk 1.5-mi. to Twin Owls. Alternative 4 would result in a **moderate benefit** to some rock climbers because of the proximity of the parking lot to rock climbing routes at the west end of Lumpy Ridge. Alternative 4 would result in a **moderate impact** to hikers and rock climbers who must walk 1.25-mi. to Twin Owls. Because the relocation alternatives provide increased parking capacity, an increase in wilderness use is anticipated. This increase is expected to have a **minor impact** on the experience of park visitors in wilderness areas.

The realignment of the Black Canyon Trail would have a **moderate impact** on hikers and rock climbers because of less favorable terrain.

4.12 Park Operations

Effects of the No Action Alternative

The park performs very little maintenance at the current Twin Owls parking lot. The paved portion of the access road through the MacGregor Ranch is deteriorating. Although located on private property, the access road is within the authorized boundary of RMNP. Because the north half of the access road is used almost exclusively for park purposes, it is anticipated that the RMNP would have to pay for future maintenance of this portion of the road.

Effects of the Parking Lot Relocation Alternatives

If one of the relocation alternatives is selected, park staff would be involved in project design, construction and maintenance for the access road, parking lot, and connecting trail. Park staff would likely be involved in constructing the connecting trail, but it is not known at this time if park staff would construct the new access road and parking lot or if that would be done by a contractor. Park rangers would provide oversight and law enforcement at the new location.

Maintenance and ranger oversight would be easiest at the Alternative 3 location because of the short access road and easy access from Devils Gulch Road. Maintenance and oversight would be only slightly more difficult at the Alternative 2 location because of the longer access road. Maintenance and oversight would be more difficult at the Alternative 1 location because of the length of the access road, and the parking lot is hidden from view behind rock outcrops, which makes ranger patrol more time consuming. Alternative 4 would be the most difficult to maintain and patrol due to the long length of the access road. It is anticipated that snow removal from the Alternative 4 access road would be difficult because portions of the road are located on a north-facing slope, and snow is likely to drift across the road.

The Alternative 1 location is adjacent to four seasonal homes. To minimize impacts to these adjacent homes, additional screen plantings of trees and shrubs would be done at strategic locations along the access road and at certain points along the perimeter of the parking lot. Park staff would be involved in planting and maintaining these screen plantings.

Screen plantings are also proposed for the Alternative 2 and 3 sites. Park staff would also be involved in planting and maintaining these screen plantings.

As is the case with any project, funds and staff time that are needed to relocate the Twin Owls and Gem Lake parking lots could be devoted to other projects if the relocation did not take place.

Effects of the Land Exchange and Black Canyon Trail Realignment

The proposed land exchange would consolidate MacGregor Ranch and RMNP interests. This is expected to make law enforcement easier and would hopefully minimize trespass on the Ranch.

By law, Colorado is a “Fence Out” state, which means that a landowner who wishes to keep cattle off his property must erect a fence. The NPS would be required to erect a fence along the new park boundary to keep cattle out of the park. At this time it is not known if the fencing would be done by park staff or a contractor.

The Black Canyon Trail realignment would require RMNP staff time for design, construction and maintenance, as well as restoration of the original trail alignment. As is the case with any project, funds and staff time that are needed to realign the Black Canyon Trail could be devoted to other projects if the alignment did not take place.

Maintenance of the realigned Black Canyon Trail is expected to cost more and take more time than the existing trail. This is due primarily to steeper grades along the realigned trail and greater potential for erosion. More staff time would be devoted to trail maintenance to prevent erosion.

Cumulative Impacts

The park does almost no maintenance to the Twin Owls parking lot under current conditions. The relocation of the Twin Owls and Gem Lake parking lots would require construction of a new parking lot, access road and connecting trails. The proposed land exchange could lead to the future realignment of the Black Canyon Trail. Because there are numerous construction projects taking place throughout the park, these design and construction projects would result in a short-term moderate cumulative impact to park operations. Ongoing maintenance of these facilities would result in a long-term minor cumulative impact on park operations and the park budget.

Proposed Mitigation

The construction standards and materials used by the park for the construction of the parking lot, access road, connecting trails, fencing and realignment of the Black Canyon Trail would help to keep long-term maintenance costs down. Efficient use of park staff and cost savings may be realized by hiring contractors to perform the work.

Conclusion

Selecting the No Action Alternative does nothing to resolve the longstanding access and parking issue with the MacGregor Ranch Trustees. Emergency access remains inadequate. Alternatives 1 and 2 result in a **moderate benefit** to RMNP as the longstanding issue with the MacGregor Ranch Trustees is resolved. Alternatives 3 and 4 do not resolve the longstanding access and parking issue with the MacGregor Ranch Trustees because they are opposed to both of these alternatives. Alternative 4 would result in a substantial cost to upgrade the 1.35-mi. access road. This would have a **minor impact** on park operations because funds would be diverted away from other projects and there would be a substantial cost to maintain the road.

4.13 Visual and Scenic Resources

Effects of the No Action Alternative

The visual impacts of the current Twin Owls and Gem Lake parking lots would remain unchanged if the No Action Alternative is selected. The current Gem Lake parking lot

and trail are highly visible from at least 5 nearby homes, all of which are occupied by full-time residents. The Gem Lake parking lot is also highly visible from Devils Gulch Road.

The current Twin Owls parking lot is not readily visible from nearby homes or from Devils Gulch Road. However, it is visible from the museum area of the MacGregor Ranch and from the upper sections of the “Book,” which is a popular rock climbing destination.

Effects of the Parking Lot Relocation Alternatives

There are a number of residences in the vicinity of the MacGregor Ranch. Some of these residences would experience visual impacts if the Twin Owls and/or Gem Lake parking lots are relocated. The majority of the affected residences are occupied seasonally, primarily during the summer months. However, seasonal occupancy coincides with the highest visitor use of the Twin Owls and Gem Lake parking lots. The visible components of the various alternatives are summarized in Table 9, below:

Table 9 – Visible Components of the Various Alternatives

Alternative	MacGregor Ranch Museum	Outlying Areas MacGregor Ranch	Nearby Landowners	Devils Gulch Road	RMNP Interior
1	None	Access Road (minimal)	Access road	Access Road	Trail
2	None	Access road, parking lot and trail	Access road, parking lot and trail	Access road and parking lot	Trail
3	Access Road and parking lot	Access road, parking lot and trail	Trail	Access road and parking lot	Access road, parking lot and trail
4	Access road	Access road and parking lot	None	None	Access road, parking lot and trail
5	Access road and parking lot	Access road and parking lot	None	Access road	Access road and parking lot

Parking Lot Visual Impacts. The Alternative 1 parking lot location would have no visual impact on *adjacent* or *nearby* seasonal residents, Devils Gulch Road, the MacGregor Ranch, or RMNP. There would be no visual impact because the parking lot would be at least 300 feet away from the nearest residence and screened by intervening mature vegetation, existing rock outcrops and additional screen plantings of native trees and shrubs. Because the Gem Lake parking lot would be closed and restored, 5 full-time residences would experience moderate benefits, as would travelers on Devils Gulch Road. The MacGregor Ranch and RMNP would experience moderate benefits from closure of the existing Twin Owls parking lot.

The Alternative 2 parking lot location would create minor visual impacts to 1 seasonal and 1 full-time *adjacent* residences. The visual impact is minor because the parking lot would be at least 300 feet away from both residences and screened by intervening mature vegetation. The Alternative 2 parking lot would have a moderate visual impact to 2 full-time and 4 seasonal *nearby* residences, and to passersby on Devils Gulch Road. There would be a moderate visual impact to the MacGregor Ranch because the parking lot would be visible from the A.Q. MacGregor cabin, which is used by the Ranch for environmental education activities. There would be no visual impacts from RMNP. Because the Gem Lake parking lot would be closed and restored, 5 full-time residences would experience moderate benefits, as would travelers on Devils Gulch Road. The MacGregor Ranch and RMNP would experience moderate benefits from closure of the existing Twin Owls parking lot.

The Alternative 3 parking lot location would not be visible from *adjacent* residences. However these residents use the MacGregor Ranch road to access their homes, and they would see the parking lot as they drive by, resulting in a moderate visual impact to these residents. There would be minor visual impacts to 1 full-time and 1 seasonal *nearby* residences. The impacts would be minor because the parking lot would be at least 1,500 feet away from both residences. There would be a moderate visual impact to passersby on Devils Gulch Road because northbound traffic on MacGregor Avenue would be able to view the parking lot on a direct line of sight for an extended period of time. There would be moderate visual impacts to the MacGregor Ranch and minor visual impacts to RMNP. Because the Gem Lake parking lot would remain, there would be no beneficial visual impacts to landowners in the vicinity of the Gem Lake parking lot. The MacGregor Ranch and RMNP would experience moderate benefits from closure of the existing Twin Owls parking lot.

The Alternative 4 parking lot location would create no visual impacts to *adjacent* or *nearby* residences or to passerby on Devils Gulch Road. There would be moderate visual impacts to the MacGregor Ranch and RMNP. Because the Gem Lake parking lot would remain, there would be no beneficial visual impacts to landowners in the vicinity of the Gem Lake parking lot. The MacGregor Ranch and RMNP would experience moderate benefits from closure of the existing Twin Owls parking lot.

Access Road Visual Impacts. The Alternative 1 access road would have a moderate visual impact on 4 *adjacent* seasonal residences and 2 full-time and 2 seasonal *nearby* residences that are located 600 to 1,100 feet from the access road. The access road would have a minor visual impact for travelers on Devils Gulch Road. The closure and restoration of the Gem Lake parking lot would offset the visual impact from Devils Gulch Road. There would be no visual impacts to RMNP. Elimination of visitor traffic on the access road leading to the existing Twin Owls parking lot would also result in moderate benefits to the visual resources of the MacGregor Ranch and RMNP.

The Alternative 2 access road would have a minor visual impact on 1 *adjacent* seasonal residence that is located approximately 1,100 feet from the access road. The access road would have a negligible visual impact on 2 full-time and 4 seasonal *nearby* residences that are located 1,100 to 1,600 feet from the access road. The access road would have a minor visual impact for travelers on Devils Gulch Road. The closure and restoration of the Gem Lake parking lot would offset the visual impact from Devils Gulch Road. There would be a minor visual impact to the MacGregor Ranch because the access road would be visible from the A.Q. MacGregor cabin, which is used by the Ranch for environmental education activities. There would be no visual impact to RMNP. Elimination of visitor traffic on the access road leading to the existing Twin Owls parking lot would also result in moderate benefits to the visual resources of the MacGregor Ranch and RMNP.

The Alternative 3 access road would create no additional visual impacts to *adjacent* or *nearby* residences, to passerby on Devils Gulch Road, to the MacGregor Ranch or RMNP because it utilizes the existing entrance road for the MacGregor Ranch. Elimination of visitor traffic on the access road leading to the existing Twin Owls parking lot would result in moderate benefits to the visual resources of the MacGregor Ranch and RMNP.

The Alternative 4 access road would create no visual impacts for *adjacent* or *nearby* residences or passerby on Devils Gulch Road. There would be a moderate visual impact to the MacGregor Ranch because the 1.35-mile long access road would be visible from numerous locations throughout the Ranch, including the historic MacGregor Ranch museum area. The access road would also have a moderate visual impact on RMNP because it would be visible from numerous locations within the park, including the Black Canyon Trail and numerous rock climbing routes and destinations.

Connecting Trail Visual Impacts. The connecting trail from the Alternative 1 parking lot would head northwest until it enters RMNP. The Alternative 1 connecting trail would have no visual impacts to *adjacent* or *nearby* residences or from Devils Gulch Road. The trail would have a negligible visual impact on the MacGregor Ranch and a minor visual impact on RMNP. Private landowners would benefit from the closure and restoration of the Gem Lake parking lot and 1/3 mile of trail that crosses private property.

The Alternative 2 connecting trail heads east, then turns north and then northwest before entering RMNP. The first portion of the trail traverses an open meadow for approximately ¼ mile, which would create moderate visual impacts to 1 full-time and 4 seasonal *adjacent* residences. There would be minor visual impacts to 2 full-time and 3 seasonal *nearby* residences. The trail would have a negligible visual impact on the MacGregor Ranch or passerby on Devils Gulch Road. There would be a minor visual impact on RMNP. Private landowners would benefit from the closure and restoration of the Gem Lake parking lot and 1/3 mile of trail that crosses private property.

The Alternative 3 connecting trail heads east, then turns north and then northwest before entering RMNP. The first portion of the trail traverses an open meadow for approximately ½ mile, which would create moderate visual impacts to 1 full-time and 4 seasonal *adjacent* residences. There would be minor visual impacts to 2 full-time and 3 seasonal *nearby* residences. The trail would have a minor visual impact on the MacGregor Ranch because it would be visible from the A.Q. MacGregor cabin, which is used by the Ranch for environmental education activities. The trail would have a negligible visual impact to passerby on Devils Gulch Road. There would be a minor visual impact on RMNP. Because the existing Gem Lake parking lot and connecting trail through private property would remain, there would be no benefit to landowners in the vicinity of the existing Gem Lake parking lot.

The Alternative 4 connecting trail would head north until it enters RMNP. The trail would create no visual impacts for *adjacent* or *nearby* landowners, for passerby on Devils Gulch Road or from the MacGregor Ranch. There would be minor visual impacts to RMNP because the trail would be visible from several locations within the park, including the Black Canyon Trail and numerous rock climbing routes and destinations. Because the existing Gem Lake parking lot and connecting trail through private property would remain, there would be no benefit to landowners in the vicinity of the existing Gem Lake parking lot.

Effects of the Land Exchange and Black Canyon Trail Realignment

If Alternative 2, 3 or 4 is selected, the 10.04 and the 1.48-acre parcels currently owned by the NPS would revert to the MacGregor Ranch. Those parcels, plus two other parcels the Ranch owns, can be sold for development. Depending on the type and density of development, there could be moderate visual impacts to nearby landowners.

If the land exchange is completed, fencing would be erected to clearly define MacGregor Ranch, RMNP and adjacent private landowner interests. The fencing would have a minor visual impact to *adjacent* and *nearby* landowners, passerby on Devils Gulch Road, the MacGregor Ranch and RMNP.

Portions of the existing Black Canyon Trail are visible from numerous locations throughout the MacGregor Ranch, and from numerous locations within RMNP. The proposed alignment for the Black Canyon Trail is less visible. There would be a minor benefit to the MacGregor Ranch and to RMNP if the trail is realigned. The trail realignment would have no visual impact to *adjacent* or *nearby* landowners, or passerby on Devils Gulch Road.

Cumulative Impacts

The scenic character of the North End neighborhood in the vicinity of the MacGregor Ranch has been modified over time by the construction of additional roads, homes, and driveways. RMNP has not identified any future activities in this location that would affect visual resources. The proposed parking lot relocation and associated access road and connecting trail would add an incremental cumulative effect to the scenic character of the neighborhood. The combined cumulative effect of the parking lot relocation plus

past and future actions would result in a moderate change to the scenic quality *adjacent* and *nearby* landowners currently enjoy. The combined cumulative effect of the parking lot relocation plus past and future actions would result in a minor level of change to the scenic quality of RMNP.

Proposed Mitigation

If Alternative 1 is selected, existing rock outcrops would be preserved to the greatest extent possible to provide visual screening. For all of the alternatives, the access road would be designed to be as far as possible from nearby residences, and existing vegetation (especially trees) would be preserved to the greatest extent possible in order to provide visual screening. If Alternative 2 or 3 is selected, earthen berms, shrubs and evergreen trees would be used for visual screening of the entrance road and parking lot. All disturbed areas would be revegetated with native plants upon completion of the project.

Conclusion

Selecting the “No Action” Alternative would continue to result in **moderate visual impacts** to the MacGregor Ranch and from some rock climbing routes in the vicinity of the Twin Owls. There would also continue to be **minor visual impacts** to nearby landowners from the existence of the current Gem Lake parking lot.

All of the parking lot relocation alternatives would result in a **minor benefit** to scenic vistas within RMNP and the MacGregor Ranch because of the removal and restoration of the Twin Owls parking lot. Alternatives 1 and 2 would result in a **minor benefit** to nearby landowners if they choose to have the current Gem Lake parking lot and trail removed and restored to natural conditions. The parking lot as proposed in Alternative 1 would have **no visual impact** on adjacent or nearby landowners. The access road for Alternative 1 would have a **moderate visual impact** to nearby landowners. Alternative 2 would have a **moderate visual impact** to nearby landowners from the parking lot, access road, connecting trail and possible sale and development of the two parcels of land that would revert to the MacGregor Ranch through the proposed land exchange. Alternative 2 would also have a **moderate visual impact** to the MacGregor Ranch and passersby on Devils Gulch Road. Alternative 3 will have a **moderate visual impact** on nearby landowners that must drive by the parking lot on the way to and from their homes. Alternative 3 could have **minor to moderate** impacts on adjacent and nearby landowners with the possible sale and development of the two parcels of land that would revert to the MacGregor Ranch through the proposed land exchange. Alternative 3 would have a **moderate visual impact** on the MacGregor Ranch and passersby on Devils Gulch Road because of the highly visible location of the proposed parking lot at the entrance to the Ranch. This impact can be partially mitigated through the careful placement of earthen berms, shrubs and evergreen trees. Alternative 4 will have **no visual impact** on nearby landowners. Alternative 4 could have **minor to moderate** impacts on adjacent and nearby landowners with the possible sale and development of the two parcels of land that would revert to the MacGregor Ranch through the proposed land exchange. Alternative 4 would have a **moderate visual impact** on the MacGregor Ranch and the Ranch Foreman’s house. Alternative 4 could also have a **minor to moderate visual impact** for rock climbers at the west end of Lumpy ridge because of the visibility of the parking lot and lengthy access road.

Because there would be no major, adverse impacts to visual and scenic resources whose conservation is: 1) necessary to fulfill specific purposes identified in the enabling legislation of RMNP; 2) key to the natural or cultural integrity of the Park; or 3) identified as a goal in the Master Plan (1976) or other relevant NPS planning documents, there would be no impairment of the Park's resources or values.

4.14 Local and Regional Economy

Effects of the No Action Alternative

With the No Action alternative current climbing and horseback riding concessionaires would be able to continue operating as they have in the past. There would be no impact on the local and regional economy if the No Action alternative is selected.

Effects of the Parking Lot Relocation Alternatives

There is one concessionaire that offers horseback rides to Gem Lake using the trail that connects to the park from the existing Gem Lake parking lot. If Alternative 1 or 2 is selected, the 1/3-mile connecting trail is proposed to be closed and restored if the affected landowners concur. Closing the trail would require horseback riders to cross Devils Gulch Road directly opposite the local equestrian trail known as Otie's Trail. A new trail would be constructed to connect to trails within the park. This is expected to have no impact on Silverlane Stables, which is a local horseback riding concessionaire.

The one concessionaire that offers guided climbing trips and climbing lessons in the Lumpy Ridge area is concerned that the extra hiking distance from the a new parking lot would discourage clients. The added distance from the alternative parking lots to climbing routes at the east end of Lumpy Ridge is:

- Alternative 1 - 0.7 mile
- Alternative 2 - 1.2 mile
- Alternative 3 - 1.5 mile
- Alternative 4 - 1.25 mile.

There are climbs east of Twin Owls and also "bouldering" areas near the proposed parking lot that may help to offset the impact of the extra distance. If Alternative 4 is selected, climbing routes at the west end of Lumpy Ridge would become more accessible. If Alternative 1, 2 or 3 is selected, the impact to the climbing concessionaire is expected to be minor because there are many other climbing areas in Larimer and Boulder counties that are readily accessible. If Alternative 4 is selected there would be a minor benefit to the climbing concessionaire because climbing routes at the west end of Lumpy Ridge would be more readily accessible.

Effects of the Land Exchange and Black Canyon Trail Realignment

The proposed land exchange would result in a moderate financial benefit to the MacGregor Ranch by ensuring future access to irrigated and dryland pasture for livestock. It is anticipated that the taxable value of the MacGregor Ranch would increase slightly, resulting in a minor benefit to local taxing entities. The proposed land exchange would result in a minor benefit the local economy by adding additional land to RMNP that would open up additional recreational possibilities for park visitors.

The Black Canyon Trail realignment is expected to have no impact on the local or regional economy.

Cumulative Impacts

Various projects that are planned or underway in RMNP are expected to have a moderate cumulative effect on the local and regional economy. Examples include the improvements that are proposed at the Beaver Meadows Visitor Center and the Bear Lake Road Improvement Project. The Twin Owls and Gem Lake parking lot relocation is expected to have a minor impact on the local and regional economy when the cumulative effects are combined with the more significant projects stated above. The impacts from the Beaver Meadows Visitor Center and the Bear Lake Road Improvement Project will be temporary.

Proposed Mitigation

The 1/3-mile connecting trail from the existing Gem Lake parking lot to RMNP would remain in place if Alternative 3, 4 or 5 (the No Action Alternative) were selected. Therefore, under these alternatives there would be no impact to the horseback riding concessionaire.

If Alternative 1 or 2 were selected, the 1/3-mile connecting trail from the existing Gem Lake parking lot would be closed and restored only with the concurrence of the affected landowners. The landowners could decide that the Gem Lake This should remain open to the horseback riding concessionaire. In that case, only the Gem Lake parking lot would be closed and restored. Landowners adjacent to the existing parking lot and trail would be consulted before any decision is made. However, with the implementation of either Alternative 1 or 2, the park would not longer maintain or sign the beginning portion of the Gem Lake Trail that is located outside the park.

If Alternative 1, 2, or 3 is implemented, a trail would be constructed directly opposite Devils Gulch Road from Otie's Trail to provide access to the park for Silverlane Stables.

Conclusion

The "No Action" Alternative would have **no impact** on local concessionaires, the local or regional economy. The parking lot relocation alternatives would have **no impact** on the concessionaire that offers horseback rides.

Alternative 1, 2 or 3 would have a **minor impact** on one climbing concessionaire who provides guided climbing trips and climbing lessons in the Black Canyon area due to added distance and time required to reach climbing destinations. Alternative 4 would provide improved access to climbing areas located at the west end of Lumpy Ridge and would result in a **minor benefit** to the concessionaire.

4.15 Nearby Landowners (Excluding the MacGregor Ranch)

Effects of the No Action Alternative

There are no private landowners in the vicinity of the existing Twin Owls parking lot or the access road leading to the parking lot. If the No Action Alternative is selected there would be no impacts to nearby landowners.

The current Gem Lake parking lot is adjacent to, and possibly encroaches on, 2 private properties. The parking lot is highly visible from 5 full-time residences and generates moderate visual impacts for these landowners. Noise from vehicles, people and horses, light from vehicles, and trespassing are minor impacts that occur to the 5 nearby residences.

The trail that connects the existing Gem Lake parking lot to RMNP follows an existing east-west right-of-way for about 400 feet, then turns north and crosses 2 privately owned parcels of land before entering RMNP. The private landowners do not object to the presence of the Gem Lake Trail. The trail directly impacts 2 full-time and 2 seasonal residences. The trail creates minor visual impacts, noise from people and horses, and trespass impacts to the affected landowners.

If the No Action Alternative is selected, the impacts to nearby landowners resulting from the existing Gem Lake parking lot and connecting trail would continue to occur.

Effects of the Parking Lot Relocation Alternatives

Parking Lot Impacts.

Alternative 1. The parking lot would impact 1 *adjacent* seasonal residence. There would be additional stormwater runoff that could impact *nearby* residences. Potential short-term impacts to the *adjacent* residence include:

- Moderate Visual impacts from construction equipment and ground disturbance during construction
- Moderate noise impacts during construction.
- Minor dust impacts generated during construction.
- Minor erosion and sedimentation impacts as a result of construction and increased stormwater runoff.

Potential long-term impacts include:

- Minor to moderate impacts from headlight glare at night.
- Minor to moderate noise impacts from vehicles, people and horses using the parking lot
- Minor impacts from trespassing.
- Minor impacts from erosion and sedimentation as a result of increased stormwater runoff.

With the concurrence of the affected landowners, the existing Gem Lake parking lot and 1/3-mile of the Gem Lake Trail can be closed and restored to natural conditions. This would result in moderate benefit to 5 full-time nearby residents.

Alternative 2. The parking lot would impact 1 seasonal and 1 full-time *adjacent* residences and 2 full-time and 4 seasonal *nearby* residences. Potential short-term impacts include:

- Moderate visual impacts from construction equipment and ground disturbance during construction.
- Moderate noise impacts during construction.
- Minor dust impacts generated during construction.

Potential long-term impacts include:

- Moderate visual impacts from the parking lot and parked vehicles, including glare caused by sunlight reflecting off glass and metal surfaces.
- Minor impacts from headlight glare at night.
- Minor to moderate noise impacts from vehicles, people and horses using the parking lot
- Minor impacts from trespassing.

With the concurrence of the affected landowners, the existing Gem Lake parking lot can be closed and restored to natural conditions. This would result in beneficial moderate impacts to 5 full-time nearby residents.

Alternative 3. The parking lot would not be visible from *adjacent* residences. However, for those residents who use the MacGregor Ranch road to access their homes, the parking lot would be visible as they drive by. The parking lot would impact 1 full-time and 1 seasonal *nearby* residences. Potential short-term impacts include:

- Minor visual impacts from construction equipment and ground disturbance during construction.
- Minor noise impacts during construction.

Potential long-term impacts include:

- Minor visual impacts from the parking lot and parked vehicles, including glare caused by sunlight reflecting off glass and metal surfaces.
- Negligible impacts from headlight glare at night.

If this alternative is selected, the current Gem Lake parking lot would remain in place. The parking lot is highly visible from 5 full-time residences and generates moderate visual impacts for these landowners. Noise from vehicles, people and horses, light from vehicles, and trespassing are minor impacts that would continue to occur to the 5 nearby residences.

Alternative 4. The parking lot would have no impact on *adjacent* or *nearby* residences. However, if this alternative is selected, the current Gem Lake parking lot would remain in place and the ongoing impacts to nearby residences would be the same as described for Alternative 3.

Access Road Impacts.

Alternative 1. The access road would impact 4 *adjacent* seasonal residences and 2 full-time and 2 seasonal *nearby* residences. The seasonal residences are occupied primarily during the summer months when use of the access road would be greatest. Some of the *adjacent* homes have been in the same family for generations, and there are strong family ties to these locations. Also, views from these homes onto the MacGregor Ranch pastures have remained unchanged for many decades. Development of a new access road would result in

moderate impacts to the current, tranquil setting. Potential short-term impacts to *adjacent* and *nearby* landowners include:

- Moderate visual impacts from construction equipment and ground disturbance during construction
- Moderate noise impacts during construction.
- Minor dust impacts generated during construction.

Potential long-term impacts include:

- Moderate visual impacts from the access road and vehicles traveling on the road, including glare caused by sunlight reflecting off glass and metal surfaces.
- Minor to moderate impacts from headlight glare at night.
- Minor to moderate noise impacts from vehicles, people and horses using the access road.
- Minor impacts from trespassing.

Alternative 2. The access road would impact 1 *adjacent* seasonal residence and 2 full-time and 4 seasonal *nearby* residences. Potential short-term impacts to *adjacent* and *nearby* landowners include:

- Moderate visual impacts from construction equipment and ground disturbance during construction
- Moderate noise impacts during construction.
- Minor dust impacts generated during construction.

Potential long-term impacts include:

- Moderate visual impact from the access road and vehicles traveling on the road, including glare caused by sunlight reflecting off glass and metal surfaces.
- Minor impacts from headlight glare at night.
- Minor noise impacts from vehicles, people and horses using the access road.

Alternative 3. The access road would create no additional impacts to *adjacent* or *nearby* residences as the road currently serves as the main entrance to the MacGregor Ranch.

Alternative 4. The access road would create no additional impacts to *adjacent* or *nearby* residences.

Connecting Trail Impacts.

Alternative 1. The connecting trail would have no impacts on *adjacent* or *nearby* residences. If this alternative is selected, the existing Gem Lake parking lot and 1/3-mile connecting trail could be closed and restored, with the concurrence of the affected landowners. Closure of the connecting trail would have minor beneficial impacts to landowners adjacent to the trail. Closure of the trail would reduce noise impacts from hikers and horseback riders as well as trespassing.

Alternative 2. The connecting trail would impact 1 full-time and 4 seasonal *adjacent* residences and 2 full-time and 3 seasonal *nearby* residences. Construction impacts are expected to be minor and of short duration. Potential long-term impacts include:

- Minor visual impact from the trail itself and from hikers and horseback riders traveling on the trail..

- Minor to moderate noise impacts from hikers and horseback riders using the trail.
- Minor trespass impacts.

If this alternative is selected, the existing Gem Lake parking lot and 1/3-mile connecting trail could be closed and restored, with the concurrence of the affected landowners. Closure of the connecting trail would have minor beneficial impacts to landowners adjacent to the trail, as described above.

Alternative 3. The connecting trail would impact 1 full-time and 4 seasonal *adjacent* residences and 2 full-time and 3 seasonal *nearby* residences. Construction impacts are expected to be minor and of short duration. Potential long-term impacts include:

- Minor visual impact from the trail itself and from hikers and horseback riders traveling on the trail..
- Minor to moderate noise impacts from hikers and horseback riders using the trail.
- Minor trespass impacts.

If this alternative is selected, the current Gem Lake parking lot and connecting trail would remain in place. The trail creates minor visual and noise impacts to 4 *adjacent* landowners. These impacts would continue to occur.

Alternative 4. The connecting trail would have no impacts on *adjacent* or *nearby* residences. If this alternative is selected, the current Gem Lake parking lot and connecting trail would remain in place. The trail creates minor visual and noise impacts to 4 *adjacent* landowners. These impacts would continue to occur.

Effects of the Land Exchange and Black Canyon Trail Realignment

If alternative 1 is selected approximately 100 acres located in the northeast corner of the MacGregor Ranch would be transferred to RMNP. No change to the exterior boundary of RMNP is required for this portion of the land exchange. Seven *adjacent* landowners that currently have contiguity with the MacGregor Ranch conservation easement, would be contiguous with land that is owned and managed by RMNP.

In addition, three parcels containing approximately 4 acres located at the east end of the ranch would also be transferred to RMNP. A minor adjustment to the exterior boundary of the park would be required for this portion of the land exchange. One landowner would be contiguous with RMNP where there was no contiguity before. Two landowners would have additional contiguity with RMNP. For one of the property owners the total contiguity amounts to 85 percent of the total perimeter of the lot.

The lands acquired by RMNP from the MacGregor Ranch would be available for public use, including “bouldering”, hiking and picnicking. Adjacent landowners could experience the following long-term impacts:

- Minor visual impacts from seeing hikers, climbers and picnickers.
- Minor noise impacts from hikers, climbers and picnickers.
- Minor impacts from trespassing.

If alternative 2, 3 or 4 is selected, approximately 84 acres located in the northeast corner of the MacGregor Ranch would be transferred to RMNP. No change to the exterior boundary of RMNP is required for this portion of the land exchange. Seven *adjacent* landowners that

currently have contiguity with the MacGregor Ranch conservation easement, would be contiguous with land that is owned and managed by RMNP.

Also, RMNP would transfer the 10.04-acre and the 1.48-acre parcels it owns north of Devils Gulch Road to the MacGregor Ranch. A minor adjustment to the exterior boundary of the park would be required to exclude these two parcels from RMNP. Three *adjacent* landowners that currently have contiguity with RMNP would no longer be contiguous with the park. One landowner would have less contiguity.

The lands acquired by RMNP from the MacGregor Ranch would be available for public use, including “bouldering”, hiking and picnicking. Adjacent landowners could experience the following long-term impacts:

- Minor visual impacts from seeing hikers, climbers and picnickers.
- Minor noise impacts from hikers, climbers and picnickers.
- Minor impacts from trespassing.

The lands acquired by the MacGregor Ranch from RMNP would be available for residential development. Adjacent landowners could experience the following long-term impacts if the land was sold for development:

- Moderate visual impacts from new homes and access drives.
- Minor to moderate noise impacts associated with residential use.
- Minor to moderate impact from exterior lighting and glare from reflective surfaces.

That portion of the land exchange that is proposed for the north side of the MacGregor Ranch, and the Black Canyon Trail realignment would have no impact on *adjacent* or *nearby* landowners.

Cumulative Impacts

The character of the North End neighborhood in the vicinity of the MacGregor Ranch has been modified over time by the construction of additional roads, homes, and driveways. RMNP has not identified any future activities in this location that would affect nearby landowners. The proposed parking lot relocation and associated access road and connecting trail would have an incremental cumulative impact on the character of the neighborhood. The combined cumulative effect of the parking lot relocation plus past and future actions would result in a moderate change to the scenic quality, solitude, and privacy that adjacent and nearby landowners currently enjoy. The combined cumulative effect of the parking lot relocation plus past and future actions would result in a minor change to the character of RMNP. The closure and reclamation of the existing Twin Owls parking lot would offset the minor change in character to RMNP.

Proposed Mitigation

The following measures would be employed to reduce impacts:

Visual, Noise, Light and Glare Impacts.

- To minimize impacts to seasonal residents, construction would not take place from May through September.
- Construction hours would be limited to 8:00 a.m. to 5:00 p.m. Monday through Friday.

- The Alternative 1 parking lot would be located at the far north edge of the 10.04-acre parcel that is currently owned by the NPS.
- Existing rock outcrops at the Alternative 1 parking lot would be preserved to the greatest extent possible.
- At the Alternative 1 site, the access road would be designed to use the existing topography to screen lines of sight and noise.
- Existing vegetation would be preserved to the greatest extent possible at all alternative parking lot and access road locations.
- Earthen berms would be used at strategic locations at all alternative parking lot and access road sites where necessary. Adjacent and nearby landowners would be consulted regarding the location of berms.
- Additional screen plantings of trees and shrubs would be used at strategic locations at all alternative parking lot and access road sites where necessary. Adjacent and nearby landowners would be consulted regarding the location of additional screen plantings.
- No exterior lighting would be used at any of the alternative locations.

Dust.

- To minimize impacts to seasonal residents, construction would not take place from May through September.
- During construction, soil in the construction area would be kept damp in order to minimize the generation of dust.
- With the exception of Alternative 4, the access road and parking lot for all of the alternatives would be paved. A portion of the Alternative 4 access road would be paved to reduce impacts to the MacGregor Ranch Foreman's residence.
- Areas disturbed during construction would be revegetated with native vegetation as quickly as possible to minimize soil exposure to wind.

Invasive Exotic Plants.

- Minimize the area of disturbance and the length of time that disturbed soils are exposed.
- Revegetate with native species as quickly as possible to minimize the invasion of exotic plants.
- Avoid use of topsoil currently supporting exotic plants.
- Clean and inspect construction vehicles to prevent the import of invasive exotic plants from tires and mud on the vehicles
- RMNP staff would periodically evaluate the areas around the parking lot, access road and connecting trail for the presence of invasive exotic plants. Exotics would be eradicated if they are found.

Revegetation of disturbed areas would include several measures. Principal mitigation components would include:

- Implementation of Best Management Practices to prevent wind and water erosion.
- Salvage of topsoil and existing seed sources.
- Protecting trees and shrubs adjacent to the construction site.
- Application of topsoil and native seed and plantings according to site-specific conditions and vegetation communities.

- Application of soil amendments, mulches, matting, organic matter, and other measures to facilitate revegetation.
- Revegetation seeding and planting would use native species from genetic stocks originating in the Park. Plant species density, abundance, and diversity would be restored as nearly as possible to pre-construction conditions.
- Monitoring to evaluate vegetation cover and development of contingency and maintenance plans if vegetation cover is not similar to original ground cover.

Additional measures to prevent the introduction and spread of invasive exotic plants during construction include:

- Implementation of invasive exotic plant management practices in accordance with the Park's Exotic Plant Management Plan (NPS 2001) to prevent infestation and spread.
- Minimizing the area of disturbance and the length of time that disturbed soils are exposed.
- Avoiding use of topsoil currently supporting exotic plants.
- Cleaning and inspecting construction vehicles to prevent the import of invasive exotic plants from tires and mud on the vehicles.
- Limiting the use of fertilizers that may favor invasive exotic plants over native species.
- Using periodic inspections and spot controls to prevent exotic plant establishment. If exotic plants invade an area, use of an Integrated Pest Management (IPM) process to selectively combine management techniques to control the particular species.

Erosion, Sedimentation, and Stormwater Runoff.

Runoff from the Alternative 1 parking lot and access road during a 100-year storm would amount to 7.85 cfs. This amount of runoff can be handled in a corrugated metal culvert with a diameter of 18 inches.

- Comprehensive drainage design and installation of drainage swales and culverts will be done to minimize drainage, erosion and sedimentation impacts. Drainage from the parking lot and road will be directed away from adjacent private land.
- Best Management Practices (BMPs) would be employed to minimize erosion and sedimentation during construction. Examples of erosion control measures include placement of straw bales in drainage channels, use of matting on slopes to hold soil in place, and placement of rip-rap to prevent scouring of drainage swales.
- Areas disturbed during construction would be revegetated with native vegetation as quickly as possible to stabilize soil and prevent soil loss.

Trespass.

- RMNP would furnish and install signs to discourage trespassing.
- Fencing would be installed along portions of the connecting trail to discourage trespassing. Affected landowners would be consulted before fencing is installed.
- Fencing would be used to confined vehicular traffic to the parking lot access road and parking lot for all alternatives. Gates would be installed as needed to provide access to nearby residences. Affected landowners would be consulted before fencing or gates are installed.

Conclusion

Selecting the “No Action” alternative will result in **no impact** to nearby landowners except that landowners associated with the current Gem Lake parking lot and trail would continue to experience **minor impacts**. There would be a **moderate benefit** to landowners that adjoin newly protected public land that is part of the proposed land exchange.

If Alternative 1 or 2 is selected, the existing Gem Lake parking lot and connecting trail could be closed and restored (with the concurrence of the affected landowners) resulting in a **minor benefit** to nearby residences. The Alternative 1 parking lot and connecting trail would have a **minor impact** on nearby residences. The Alternative 1 access road would have **moderate impact** on nearby residences. The Alternative 2 parking lot, access road and connecting trail will have a **moderate impact** on nearby landowners. The Alternative 3 parking lot would have a **moderate impact** on landowners that use the MacGregor Ranch road for access and who must drive by the parking lot. The Alternative 4 parking lot, access road and connecting trail will have **no impact** on nearby landowners.

If Alternative 2, 3 or 4 is selected, RMNP would transfer the 10.04-acre and the 1.48-acre parcels it owns north of Devils Gulch Road to the MacGregor Ranch. If these parcels were sold for development, *adjacent* and *nearby* landowners could experience **minor to moderate impacts** to scenic quality, solitude and privacy.

CHAPTER 5

CONSULTATION AND COORDINATION

An interdisciplinary team of park staff has conducted extensive internal and external scoping for this project over many years. Two previous EAs have been developed that evaluated various alternatives, the associated impacts and possible mitigation strategies. Public comments from the two previous EAs have been addressed in this EA and are further addressed in Appendix 2.

Agencies and Persons Consulted

Steve Griswold, former Trails Foreman, RMNP
Dave Larsen, Trails Foreman, RMNP
Craig C. Axtell, former Chief of Resources Management and Research, RMNP
Ken Czarnowski, Chief of Resources Management and Research, RMNP
Joe Arnold, Park Engineer, RMNP
Tim Devine, Natural Resources Management Specialist, RMNP
Ron Thomas, GIS Specialist, RMNP
Jayne Schaeffer, Denver Service Center, Rocky Mountain Region
Doug Ridley, Fall River District Ranger, RMNP
Scott Wanek, former Park Ranger, Fall River District, RMNP
Tim Phillips, Park Ranger, RMNP
Bill Van Horn, MacGregor Ranch Trustee
Eric Adams, MacGregor Ranch Manager
Estes Valley Land Trust
Town of Estes Park
American Alpine Club
Silver Lane Stables
Private landowners in the vicinity of the MacGregor Ranch
Bill Butler, Archeologist, RMNP
Rick Spowart, Area Wildlife Manager, Colorado Division of Wildlife
Colorado Office of Archeology and Historic Preservation
Public comments from the two previous EAs

List of Preparers

A. Durand Jones, former Superintendent, RMNP
Tony Schetzle, Acting Superintendent RMNP
Jeff Connor, Natural Resources Specialist, RMNP
Larry Gamble, Chief of the Branch of Planning and Compliance, RMNP

List of Recipients

The following agencies, organizations and individuals will receive copies of the Environmental Assessment

Businesses

Colorado Mountain School
Colorado Wilderness Sports
Gregory Mountain Products
Kent Mountain Adventures
Mattson & Jones
Neptune Mountaineering
Rock & Ice Magazine
Silver Lane Stables

Elected Officials

Colorado House Dist. 11 - Saliman, Todd
Colorado House Dist. 51 - Fritz, Tim
Colorado House Dist. 53 - Bacon, Bob
Colorado House Dist. 56 - White, Al
Colorado Senate Dist. 8 - Taylor, Jack
Colorado Senate Dist. 13 - Fitz-Gerald, Joan
Colorado Senate Dist. 15 - Matsunaka, Stan
Congressman Bob Shaffer
Congressman Mark Udall
Congressman Scott McInnis
Larimer County Commissioners
Senator Ben Nighthorse Campbell
Senator Wayne Allard

Federal Agencies

Environmental Protection Agency (EPA)
U.S. Bureau of Reclamation
USDA Forest Service

Organizations

Access Fund
American Alpine Club
American Lands Alliance
American Mountain Foundation
Audubon Society
Estes Park Chamber Resort Association
Colorado Environmental Coalition
Colorado Mountain Club
Colorado Natural Heritage Program

Colorado Open Lands
Colorado Wildlife Heritage Fund
Environmental Defense
Estes Valley Improvement Association (EVIA)
Estes Valley Land Trust
Land and Water Fund
League of Women Voters
MacGregor Ranch Trustees
National Parks and Conservation Association (NPCA)
North End Property Owners Assn.
Poudre River Trust
Rocky Mtn Elk Foundation
Sierra Club
The Conservation Fund
The Nature Conservancy
The Trust for Public Land
The Wilderness Society
Trout Unlimited
Wilderness Watch
YMCA of the Rockies

State and Local Agencies

Colorado Dept. of Natural Resources
Colorado Division of Wildlife
Colorado Fish & Wildlife Assistance
Colorado Historical Society
Colorado Natural Areas Program
Colorado Natural Heritage Program
Colorado State Forest Service
Estes Valley Recreation & Park District (EVRPD)
Larimer County Parks & Open Lands
Parish Church of St. Bartholomew
Town of Estes Park

Individuals

Ashe, S. M. Prather
Ashe, Greg
Ashe, Richard
Barnthouse, Michael
Beall, James A.
Benson, W. Alan
Biasi, Janet
Blickensderfer, Tom
Bonnell, Ann
Bowers, Elizabeth
Briggs, Paul H.
Burgess, Mr. & Mrs. William
Burgess III, Mr. William
Byrnes, John
Chase, Mark A.
Coleman, Ann
Courter, Cathee
Cowan, Kerry
Cronan, J. Michael
Crotty, Joseph P.
Damm, David Michael
Donahue, Mike & Peggy
Edwards, Paula
Feduschak, Markian
Fogarty, Heather
Freudenburg, Eldon
Gambino, Daniel
Garvey, Keith
Gibbs, George & Dorothy
Gillett, Bernard
Gonski, Julie & Stan
Graham, Margaret M.
Hampton, Bud
Hannigan, Mary L & Barry T
Harrell, Henry E.
Hollyer, Jane
Hostetler, Ellen & Robert
Howard, William C.
Jackson, Stacy
Jahnz, Barbara
Johnson, Jim
Kendall, Orpha
King, Kenneth & Kendal
Komito, Steve
Koschmieder, Kate
Kraus, Alfred P.

Larson, Cathleen
Lawrence, Jill
Lee, Jerry C. & Sherri
Linnane, Bill
Magnuson, Mr. & Mrs. Donald
Manske, Glen
Mastio, Dr. George
McCarthy, James P.
McCreery, John
McCreery, Robert B.
McIntire, Dave
Merwitzer, Mr. & Mrs. Robert
Miller, Mr. & Mrs. Tom
Monnet, Bob & Cindy
Montgomery, Lynn
Morley, Michael R.
Nichols, Roy & Rita
Nolte, Joel
Oliver, Charles E.
Paik, Leo
Parry, James M.
Pomerance, Stephen
Ramey, John
Reid, William
Sandford, Gordon & Martha
Schageman, F.W.
Scott, Richard B.
Serati, Roylnn
Siler, Gary & Christy
Szemak, Barbara & James
Turner, James K.
Vicker, Thomas W.
Warfield, Matthew J.
Younge, Kenneth A.
Zambrano, Jean M.
Zaruba, Laura
Zorko, William S.

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DO-47 *Sound Preservation and Noise Management*
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Appendix 1 MacGregor Ranch Trustees Letter

MacGregor Ranch

XIX

Muriel L. MacGregor Charitable Trust

Post Office Box 4675 - Estes Park, CO 80517

October 17, 2001

Randy Jones, Superintendent

Dear Randy Jones,

I thank you for your letter of September 28, 2001 regarding the release of the new Environmental Assessment concerning the relocation of the Twin Owls parking lot. We recognize that there is no solution that will resolve everyone's concerns, and that this is a complicated issue with several parties having very legitimate concerns. Please understand that in our negotiations with the NPS the Board of Trustees must do what is in the best interest of the MacGregor Ranch. This must follow with our mission statement of preserving and enhancing the historical aspects of the MacGregor Ranch for the educational benefit of the young people of Colorado. We currently have over 5,000 children visit the Ranch each year, these include Estes Park school system students, Front Range students as well as Boy & Girl Scout troops from the Western half of the United States. In addition, towards fulfilling our goal of returning the Ranch to its historical condition the State of Colorado has invested over \$250,000 in restoration funds through the State Historical Fund program. The Trust's response to the alternatives will be in light of these goals. We appreciate the opportunity for our input. The public/private partnership that has allowed the Ranch to become what it is today is very valued.

In general, I will outline the Trust's response to each of the five alternatives suggested. Please keep in mind that our goal is to remove recreational uses by the public from the Ranch in order to maintain and enhance its historic integrity. To the extent that this is not possible, our goal will be to move these uses to non-enslaving perimeters of the Ranch.

Alternative 1 – Relocate the Twin Owls and Gem Lake parking lots to the 10-acre parcel the park acquired from the MacGregor Trust in 1983.

The Trust prefers this alternative for the following reasons. It allows for the parking lot as well as access to the lot on park owned land (with the land exchange). No private land, either the Ranch's or neighboring owner's land, is directly impacted with easements. In addition, it relocates the parking lot and resulting traffic to a non-enslaving area on the perimeter of the Ranch and away from the core of the Ranch. The Trust will support this alternative and not oppose it.

Alternative 2 – Relocate the Twin Owls parking lot to a point east of the A.Q. MacGregor house.

The Trust views this alternative as a second possibility, although not preferred, as long as the historic integrity of the Ranch is maintained. The Board of Trustees agrees with the land exchange required to allow for this alternative, with the understanding that if this alternative were selected the 10-acre and 1.4-acre parcels will revert back to the Ranch and be available for commercial development with no restrictions other than the Gem Lake trail easement. In addition, the Trust would grant a trail easement to the park in place of the vehicle easement as outlined in alternative 1, to allow access for hikers.

The Trust cannot support and will oppose any access for hikers through the core of the Ranch.

Alternative 3 – Relocate the Twin Owls parking lot to a point near the main entrance to the MacGregor Ranch.

The Trust views this alternative as creating the highest impact to the viewscape of the Ranch. The Trust is working on creating a “window into time” for the public to view as they pass by on Devils Gulch Road. Towards this end, we are working on a multi-party project to drop all power lines on the Ranch underground. In addition, directly adjacent to this area is where the Ranch has begun to “put up” hay solely with horsepower to further preserve our historic integrity. This alternative also calls for hiker access through the core of the Ranch, still affecting the integrity of the Ranch. The Trust cannot support this alternative and will oppose it.

Alternative 4 – Relocate the Twin Owls parking lot to a point at the west end of the Ranch just before the Black Canyon access road enters the park.

This alternative creates a major impact to an area of the Ranch where significant portions of our educational activities take place. A public thoroughfare would affect the safety and integrity of the area directly adjacent to the access road. One of the aspects for the camping area for the children is that there is no public access to the area. Many children use this area. We are able to offer children’s groups a secure private location for their activities. Another problem with this alternative is that it is in an area where it is difficult at best for Ranch personnel to keep continuous monitoring for trespassing. In addition, because of the great potential for trespassing the Ranch would need to fence along side the road, as we have already had to do along the road to the current Twin Owls parking lot. The only source for water requires the livestock to cross the road thus creating yet another burden on livestock management for the Ranch. In addition, this alternative does not solve the Gem Lake parking lot problem that continues to be a burden to the Ranch. The Trust cannot support this alternative and will oppose it.

Alternative 5 – No action.

The Trust does agree with the park in that this alternative should be excluded, as it does nothing to resolve the current issue. The Trust cannot support this alternative and will oppose it.

Please keep in mind that the Board of Trustees responsibility is to preserve and protect the historic integrity of the MacGregor Ranch. Alternatives 3,4, and 5 do not protect, preserve or enhance the integrity of the Ranch; they actually create severe negative impacts on the Ranch, and therefore cannot be supported by the Board of Trustees.

On behalf of the Board, I thank you for the opportunity to respond and have the Trust’s input in the Environmental Assessment. It is in the best interests of the Ranch for this issue to reach a resolution, and we believe that through our public/private partnership that is possible. Thank you, for your efforts towards this end.

Sincerely,

A handwritten signature in cursive script, appearing to read "William G. Van Horn". The signature is fluid and elegant, with a large initial "W" and a long, sweeping underline.

William G. Van Horn
Chairman

Muriel L. MacGregor Charitable Trust

Enclosure (1)

EA

Mission Statement

The mission statement
of the Muriel L. MacGregor Charitable Trust is
*“To continue operation of the MacGregor Ranch
as a high mountain historic working cattle ranch
and to support youth education.*

*This mission will be carried out by maintaining
the presence of a cattle and horse herd,
preservation and interpretation of historic buildings
and educational tours.*

*The focus of the Ranch will be on quality experiences
through respect for the land,
the ranch and its history -
For the future generations of tomorrow’s leaders.”*

Appendix 2

Public Comments From Previous EAs and NPS Response

Current access through the MacGregor Ranch

NPS should not surrender or give appearance of surrendering a public easement that has been in continual use since the early 1940's.

The public easement is one-lane wide and is not adequate to provide safe access to the existing Twin Owls parking lot, especially in emergency situations. Securing a wider access through the MacGregor Ranch, which is private property, is problematic (see response to the next comment). The purpose of this EA is to evaluate other possible alternatives for providing safe and adequate public access and parking for park visitors.

Widen the road through MacGregor Ranch to 22 feet and then fence off the adjacent terrain preventing parking on ranch land.

This recommendation does not fully address the objectives of this project, which are to:

- Protect park and MacGregor Ranch resources
- Provide for MacGregor Ranch visitor enjoyment and safety.

The historic access is only one lane wide. The MacGregor Ranch is opposed to widening the access easement or the road. To secure a wider access road through the MacGregor Ranch, the Federal government would have to exercise its powers of condemnation. Congressional review would be required, and obtaining approval for such a condemnation is considered unlikely. A wider road would also result in adverse impacts to the MacGregor Ranch National Historic District.

The road through the ranch has been a public access road since the 1940's. The NPS should take the necessary steps to secure a dedicated easement for ingress and egress.

We believe that a parking lot has existed at the Twin Owls location since the 1970's.

With this ±30-year history of use there is a prescriptive right of public access. However, securing a dedicated easement does not meet the objectives of this project, and would be difficult to accomplish (please refer to the previous response).

Current Twin Owls parking lot

Please keep current twin owls lot. It would be a tremendous loss to lose easy access used by senior citizens. Also, why is it that your considerations fail to address, indeed, decimate access to one of Estes Park's, and the general public's, most inspiring and beautiful natural attractions (i.e., Twin Owls lot).

We understand that recreation and sightseeing opportunities will be lost for some park visitors if the Twin Owls parking lot is relocated. At the present time, park visitors experience lost recreation and sightseeing opportunities when they are turned away from the Twin Owls parking lot due to inadequate capacity. While it is true that visitors would no longer be able to drive to the Twin Owls parking area if one of the parking lot relocation alternatives is selected, access is not being denied. Access to Twin Owls would continue to be available to visitors who were willing or able to walk to the area. The drinking fountain at Twin Owls will remain for visitors to use.

The existing Twin Owls and Gem Lake parking lots are not a significant problem that warrants the building of a new parking lot.

We disagree. The objectives for this project are to:

- Provide for RMNP visitor enjoyment and safety
- Protect park and MacGregor Ranch resources
- Provide for MacGregor Ranch visitor enjoyment and safety
- Minimize impacts to nearby private landowners
- Improve the efficiency of park operations

The existing parking lots fail to meet these objectives. One could argue that the current Twin Owls parking lot minimized impacts to nearby private landowners, but this is not entirely true. The MacGregor Ranch is a private inholding within the boundaries of RMNP that is impacted by the existing parking lot, and nearby landowners are impacted to some degree by the existing Gem Lake parking lot.

The inadequate size, circulation and lack of horse trailer parking in the existing parking lots needs to be corrected.

The new parking lot would accommodate ± 100 vehicles and would be designed for easy circulation and to accommodate horse trailers.

The visual impacts on MacGregor Ranch and the park from the existing Twin Owls parking lot will continue to exist until it is closed and restored to natural conditions.

We agree. All of the parking lot relocation alternatives contain provisions for closing the current Twin Owls parking lot and restoring the land to natural conditions.

Estes Valley Comprehensive Plan and Development Code

Alternative 1 is in direct conflict with the Estes Valley Comprehensive Plan and current zoning.

The Estes Valley Comprehensive Plan designated the two NPS-owned parcels as Parks/Recreation/Open Space. The Estes Valley Development Code indicates that the two parcels are zoned RE-1, which is Rural Estate with a maximum density of 1 dwelling unit per 10 acres. Within this zoning district trails and trailheads (including parking facilities) are a use permitted by right. Even though the proposed use does conform to the Estes Valley Comprehensive Plan and Development Code, the Federal Government is not bound by these documents.

Horses

Will horses have access to Black Canyon Trail?

Yes. However, the NPS has not determined where that access will be. For example, horses could be restricted to the Gem Lake Trail and the connecting trail from there to the Twin Owls.

If the Gem Lake trailhead is relocated, will Silver Lane Stables be able to conduct horseback rides to Gem Lake?

The concessionaire will still be able to offer horseback rides to Gem Lake. As discussed in the EA, the Gem Lake parking lot may be closed but the trail could remain open. The

existing trail crosses private property, so the affected landowners must be involved in the decision to either close the first 1/3 mile of the Gem Lake Trail or keep it open.

MacGregor Ranch

The MacGregor Ranch exists in its current state today primarily because of public dollars that should be represented by the MacGregor Ranch, to some degree, in their actions dealing with the public (including NPS).

Despite the fact that the NPS acquired a conservation easement on 1,221 acres of the MacGregor Ranch, it remains private property. The conservation easement prevented future development of the ranch, but it did not encumber the MacGregor Ranch or obligate the MacGregor Ranch Trustees to the public in any other way.

If you are assisting the Ranch to return to the way things were 100 years ago, a paved parking lot and road do not belong here.

The current access road and parking lot are negatively impacting the MacGregor Ranch museum area, which accommodates most Ranch visitors. All of the parking lot relocation alternatives would remove this intrusion from the museum area, which is what the Ranch wants. The various relocation alternatives do impact other portions of the Ranch. We believe, and the Ranch concurs (please see Appendix 1), that Alternatives 1 and 2 as described in this EA, would have less impact on the Ranch than the current situation or Alternatives 3 or 4.

The conservation easement on the MacGregor Ranch was to prevent further development. Isn't the parking lot a development?

The 10.04-acre and the 1.48-acre parcels that are currently owned by the NPS are not located within the conservation easement. They were purchased in 1983 for the specific purpose of developing a parking lot. Therefore, if Alternative 1 in this EA was selected it would have no effect on the MacGregor Ranch conservation easement. If Alternatives 2, 3, or 4b in this EA were selected, the proposed parking lot would be located on MacGregor Ranch land that is currently covered by a conservation easement. As part of the proposed land exchange for Alternatives 2, 3, or 4b, the MacGregor Ranch would deed approximately 5 acres to the NPS for the parking lot and access road. Any property that is transferred to the Federal Government from the MacGregor Ranch would have to be without any encumbrances (i.e., there would be no conservation easement on any land that is transferred to the NPS).

The process appears to be biased toward the MacGregor Ranch. Why should adjacent landowners be impacted in order to address the concerns of the MacGregor Ranch?

The NPS has been aware of the problems at the MacGregor Ranch for many years. Since 1980 the NPS has been planning to address the situation by developing a new trailhead and parking lot. If anything, the 22 years that have passed since the inception of this project demonstrate that the NPS is very concerned about the adjacent landowners and has gone to great lengths to try to address their concerns. The MacGregor Ranch is also private property, and the NPS is striving to find an alternative that will solve the problem with the least amount of impact.

In 1983 the NPS spent \$3.9 million to purchase a conservation easement on 1,221 acres of the MacGregor Ranch to prevent future sale and development of the property. The

conservation easement has benefited many adjacent and nearby landowners. A conservation easement was not placed on 1.48-acre and the 10.04-acre parcels when they were acquired from the MacGregor Ranch in 1983 because they were the proposed site for the Twin Owls/Gem Lake trailhead and parking lot.

Does vibration from passing vehicles really have a negative impact on the MacGregor Ranch buildings?

In 1993 MacGregor Ranch hired Long Hoeft Architects to study the building complex and possible impacts from vehicles passing through the ranch. Long Hoeft Architects concluded, “the paved road cutting through the site is disturbing and clearly a threat to the ranch buildings and equipment.”

Has there ever been an accident between school children using MacGregor Ranch and vehicles driving to and from the Twin Owls parking lot?

No accidents have occurred that we know of. However, the MacGregor Ranch Trustees are keenly interested in removing vehicle traffic from the museum area of the Ranch in order to prevent such an accident from occurring. The MacGregor Ranch Trustees and the NPS would rather take a proactive approach and address this concern now, rather than have a tragic accident be the impetus for change.

Since RMNP purchased a conservation easement, and the ranch lies within the boundary of RMNP, does MacGregor Ranch really have the authority to put out no trespassing signs and lock gates?

Yes. The MacGregor Ranch remains private property. The conservation easement does not provide public access to the ranch, it only protects the ranch from future development.

How will the new access trail from the new parking area to the Black Canyon Trail impact MacGregor Ranch?

Park staff has met several times with representatives from the MacGregor Ranch to look at various trail alignments and alternatives for the proposed land exchange. The park and the MacGregor Ranch Trustees concur with the proposed alignment for the connecting trail. With the proposed land exchange, most of the 0.7-mile connecting trail would be on NPS land. The trail would cross the MacGregor Ranch for a distance of about 850 feet before it re-enters the park. This area of the Ranch is used for grazing. The park boundary will be fenced to keep cattle and horses from entering the park. Gates will be installed in the fence where the connecting trail exits the park and where it re-enters the park near the Twin Owls. The MacGregor Ranch will grant a right-of-way for the portion of the proposed trail that crosses the ranch. The trail is located in an area of the Ranch where trespassing should not be an issue.

National Environmental Policy Act (NEPA) compliance

The draft EA does not meet the procedural requirements of NEPA by adequately exploring alternatives.

We disagree. Over the years, park staff, the MacGregor Ranch Trustees and nearby landowners have met several times to discuss potential alternatives. Numerous alternatives have been evaluated in the two previous EAs that were released for public

review and comment. The current EA is additional evidence that the NPS has continued to evaluate possible alternatives and to make them available for public review and comment. All procedural requirements of NEPA have been addressed in the current EA. ***The draft EA does not fulfill the NEPA requirement to adequately identify and assess mitigation steps to address the impacts of the preferred alternative.***

We disagree. The two previous EAs that were released for public review and comment included mitigation measures. The current EA thoroughly evaluates potential impacts from the various alternatives and includes detailed mitigation measures that would be implemented to address specific impacts.

Criteria required to make a specific alternative rate the preferred status are not given thus leaving questions regarding reasons for preference.

We agree. The previous EAs did not adequately address the objectives of the project. Chapter 2 of the current EA more clearly defines the objectives of the project and two tables have been added to make comparison of the alternatives easier. Table 1 describes the “Methods Each Alternative Uses to Meet Project Objectives”, and Table 2 provides a “Summary Comparison of Alternatives and Impacts”

NPS original land purchase for the parking lot

A thorough analysis of the alternatives could prove the Park wrong in its initial purchase of the 10.04 acres for its stated use.

Because of the possibility that there are other alternatives, RMNP has worked extensively with neighboring land owners, the MacGregor Ranch and other interested individuals and organizations to examine a number of alternatives. These alternatives have been evaluated in two previous EAs and in this document. If Alternative 2, 3, or 4 is selected, it will indeed indicate that the park was wrong in its initial purchase and the 10.04-acre and 1.48-acre parcels the park acquired in 1983 will revert back to the MacGregor Ranch through the proposed land exchange.

Why weren't adjacent landowners notified before the purchase was made in 1983?

While adjacent landowners may not have been individually notified of the proposed purchase, there was public disclosure of the park's intentions. On May 22, 1981 the Estes Park Trail-Gazette featured a front page article and a map that described the park's interests, including the development of a new trailhead at the east end of the MacGregor Ranch. A Trail Plan for Rocky Mountain National Park was formally adopted in April 1982 after a series of public workshops in Estes Park, Grand Lake, Boulder and Fort Collins. The Plan included a proposal to close the public access road across the MacGregor Ranch, restore the Twin Owls parking lot to natural conditions, and develop a new Gem Lake/Black Canyon trailhead at the east end of the MacGregor Ranch. In January of 1983, the park released a Resources Management Plan and EA for public review and comment. The plan included information about acquiring a conservation or scenic easement on the MacGregor Ranch and fee simple acquisition of land for the development of trailhead parking and trail rights-of-way .

A number of adjacent landowners are seasonal residents. The timing of the disclosures mentioned above, although not done intentionally, coincided with those times when seasonal residents were not in Estes Park. While contacting the adjacent landowners

would have been a positive gesture on behalf of the park, it is not likely that it would have affected the purchase of the property. The NPS had Congressional approval to proceed with the purchase and had fulfilled its requirements under the National Environmental Policy Act (NEPA) through the release of the Resources Management Plan and EA (January, 1983) for public review and comment. A Finding of No Significant Impact (FONSI) was signed by the Acting Regional Director of the NPS on May 18, 1983, which was prior to the purchase of the property in September of that year.

Neighboring landowners

It seems contrary to good sense that the Park would go to such great pains to secure a conservation easement to prohibit development on the MacGregor Ranch only to then turn around and impose “development” in the form of a parking lot on those very neighbors who have worked with the Park over the years to preserve and care for the land and maintain access.

At the time the NPS purchased the conservation easement from the MacGregor Trust (September 30, 1983), the Federal government purchased two parcels of land and trail rights-of-way for the purpose of developing a new trailhead and parking lot. For this reason, the conservation easement does not cover the 10.04-acre and the 1.48-acre parcels at the east end of the MacGregor Ranch. The NPS has fee simple ownership of these two parcels. Public disclosure of the NPS plans to acquire these two parcels for the development of a new trailhead occurred in 1981, prior to purchase of the property. On May 22, 1981 the Estes Park Trail-Gazette published a front page article and a map showing the parcels the NPS hoped to acquire and indicating that they were proposed to be used for a new trailhead. The RMNP Resources Management Plan and EA (1983) also contained information about the park’s plans.

The EA does not adequately address the rights of adjacent landowners.

The NPS has been aware of the problems at the MacGregor Ranch for many years. Since 1980 the NPS has been planning to address the situation by developing a new trailhead and parking lot. This planning has been done in an open, public process that has involved the adjacent landowners. If anything, the 22 years that have passed since the inception of this project demonstrate that the NPS is very concerned about the rights of adjacent landowners.

The NPS has gone to great lengths to try to address the concerns of adjacent landowners. Park staff has attended meetings with adjacent landowners and we have heard and responded to the concerns that were expressed at those meetings and in written responses to two previous EAs. This EA contains numerous mitigation measures that are specifically designed to protect adjacent landowners. These mitigation measures will be completed at significant expense if one of the parking lot relocation alternatives is selected.

Nearby landowners are concerned about lawsuits if a climber enters private land and is injured.

This is a valid concern. The NPS will erect a fence and place signs along the park boundary where it adjoins private land. Adjacent landowners would be responsible for placing “No Trespassing” signs on their property.

Private property adjacent to the parking lot will decrease in value because of impacts from the new parking lot. This may represent a “taking.”

We disagree. Diminution of value does not constitute a “taking” of private property. There are at least four trailheads and parking areas on the east side of the park where the access road and/or parking area is/are adjacent or near developed private property. These are: the North Fork, McGraw Ranch, Longs Peak, and Allenspark trailheads. We are not aware of any instance where property value has decreased in value as a result of a nearby access road or parking area.

Landowners who are adjacent to the Alternative 1 parking lot are concerned about noise from vehicles and people using the parking lot.

This is a valid concern. The NPS is proposing to do the following to mitigate noise impacts:

- The proposed land exchange will enable the NPS to move the proposed Alternative 1 parking lot as far north as possible and as far away as possible from nearby landowners.
- The parking lot will be placed in an area that is mostly surrounded by rock outcrops which will help to block noise.
- Earthen berms and planting of additional vegetation around the exposed edges of the parking lot will help to further reduce noise.
- The access road is designed to be as far as possible from all adjacent residences.
- The access road takes advantage of the natural terrain to reduce noise impacts.
- The access road and parking lot will be paved to provide a smooth ride, reduce vehicle noise and the generation of dust.
- The NPS will work with adjacent landowners to locate reasonable locations for earthen berms and additional plantings to help block noise.
- Construction will take place during the fall, winter and spring when adjacent seasonal residences are vacant.

Landowners adjacent to the Alternative 1 site want the parking area to be screened from view by berming, fencing and planting of mature evergreens.

Please refer to the previous response. Many of the noise mitigation measures will also help to reduce visual impacts.

Adjacent landowners are concerned about dust and impacts to air quality, and requested that the road and parking lot be paved.

The parking lot and access road will be paved. During construction, water will be used to wet the soil when necessary to minimize the generation of dust. Any disturbed land adjacent to the road and parking lot will be revegetated with native plants. Mulch or netting will be placed over exposed soil after replanting to cut down on dust until the vegetation stabilizes the site.

Landowners adjacent to the Alternative 1 site are concerned about drainage impacts from the new parking lot and access road

Drainage impacts have been addressed in this EA. Please refer to the section on Erosion, Sedimentation, and Stormwater Runoff on page 106.

Adjacent landowners are concerned about trespassing, vandalism and theft.

This is a valid concern. The NPS will erect a fence and place signs along the park boundary where it adjoins private land. Adjacent landowners would be responsible for placing “No Trespassing” signs on their property.

North End Property Owners

Alternative 1 is in direct opposition to the North End Property Owners objectives of preserving and protecting the beauty, desirable living conditions and ecology of the North End.

First, the NPS spent over \$3.9 million in 1983 to purchase a conservation easement on the MacGregor Ranch to prevent the possible sale and development of the Ranch. We believe this expenditure has accomplished much to preserve and protect the beauty, desirable living conditions and ecology of the North End.

Second, under the current proposal to relocate the Twin Owls and Gem Lake trailheads, the NPS is taking great pains to protect the beauty, desirable living conditions and ecology of the North End. If Alternative 1 in this EA is selected, the NPS would incur a significant expense to locate the proposed parking lot as far north as possible in a location that is not visible from nearby homes and cabins. Not only is the parking lot more expensive to build in this location, but the access road would be longer and would cost more to construct. The NPS is also incurring significant additional expenses for design, and construction measures that would make the access road and parking lot as unobtrusive as possible. These include earthen berms and additional landscaping that are designed to mitigate impacts to nearby landowners. Alternatives 2 and 3 in this EA would have very little effect on nearby landowners, but the parking lot and access road would be visible from Devils Gulch Road. Earthen berms, and landscaping would be used to reduce the visual impact if one of these alternatives is selected. Alternative 4 in this EA would have no effect on nearby landowners.

Rock climbing

There is a concern that some climbers are being lazy for not wanting to walk an additional 0.7-mile to access climbing routes west of Twin Owls if Alternative 1 is selected.

Please see the next two comments and responses for other perspectives.

There is a safety concern expressed by some climbers about the 0.7-mile additional hike to access climbing routes west of the Twin Owls rock formation. The extra time required to reach climbing routes does not leave enough time in a day for a safe climb.

Hiking the added 0.7-mile from the Alternative 1 parking lot to the start of the Black Canyon Trail should take about 20 minutes. We do not believe that this will be a serious deterrent to climbers or create a safety concern. The hiking distance from the Alternative 4 trailhead to many popular climbing routes on Lumpy Ridge will be even shorter than what it is at the present time. The added distance to the Black Canyon Trail from the Alternative 2 parking lot location is 1.2 miles and the added distance from the Alternative 3 parking lot location is 1.5 miles. It will take longer to reach popular rock climbing routes if Alternative 2 or 3 is selected. The added time and distance will likely be a deterrent to climbers and safety is a consideration.

Some climbers who work in Estes Park like to drive to the Twin Owls parking lot and do a short climb or “bouldering” during their lunch break or late in the day.

If Alternative 1, 2 or 3 is selected there will be numerous nearby “bouldering” opportunities. With the proposed land exchange RMNP will be acquiring 85 to 100 acres of the MacGregor Ranch that contains numerous “bouldering” opportunities. If Alternative 1, 2 or 3 is selected the closest rock climbing routes will be those located east of the current Twin Owls parking lot. These include the named rock formations, “Out West Crag”, “Crescent Wall”, “Triangle Rock”, and “Gollum’s Arch Rock.”

Traffic counts and parking demand

We need accurate, independently provided facts about access road traffic and parking. These facts should include detailed counts for each day of the week and at different times of the year.

Independent traffic counts have not been conducted for the existing Twin Owls or Gem Lake parking lots. Since 1981 RMNP has planned to relocate the Twin Owls and Gem Lake parking lots to alleviate congestion and provide adequate parking capacity for park visitors. In 1999 the MacGregor Ranch installed fencing along both sides of the access road to the Twin Owls parking lot. The fencing served to constrain the access road to a single lane width, which is the historic access width. The constraints and hazards of the access road, regardless of the traffic count, are sufficient to justify taking action to correct the situation. To secure a wider access road through the MacGregor Ranch, the Federal government would have to exercise its powers of condemnation. Congressional review would be required, and obtaining approval for such a condemnation is considered unlikely.

What are future parking needs?

We have not made specific projections for future parking needs. The current Twin Owls parking lot can accommodate approximately 30 vehicles and the current Gem Lake parking lot can accommodate about 18 vehicles. The parking lots that are proposed in this EA would accommodate ± 100 vehicles, which is more than double the current capacity of both lots. We believe that the capacity of the proposed parking lots will meet the demand. In the future, if the demand is greater than the supply of parking spaces, the NPS is making a conscious choice to limit the size of the proposed parking lot to ± 100 .

Wildlife

Are you certain that closing the Twin Owls parking lot will enhance the breeding success of raptors?

Yes. Extensive survey work in RMNP since 1988 has documented no other place in the park with as high a concentration of birds of prey. As discussed in the EA, Lumpy Ridge being a low elevation ridge (below 10,000 feet) with south facing cliffs that overlook open meadows, ponderosa pine, aspen and riparian habitat with a high prey base is very desirable for birds of prey. There have been as many as ten known breeding pairs of birds of prey in any one year nesting on or near Lumpy Ridge, including the golden eagle, prairie and peregrine falcon, Northern goshawk, Cooper’s hawk, pygmy owl, great-horned owl, sharp-shinned hawk and American kestrel.

We believe closing the Twin Owls parking lot and restoring it to natural conditions will be a positive benefit for the falcons that use Twin Owls and the Northern goshawk who

nest below it. By eliminating vehicle noise and providing a little more habitat that will support prey species such as the Wyoming ground squirrel, the hawks and falcons will benefit.

How will the park minimize impacts to wildlife as a result of building a new parking lot?

Wildlife impacts are addressed in Chapter 4, Section 4.3 on page 70.

Appendix 3

Endangered, Threatened and Rare Species

(Revised December 2001)

Rocky Mountain National Park uses the following sources to identify endangered, threatened and rare species that must be protected if found within the proposed project site. Agencies have a variety of ways of tracking and measuring the biological imperilment of species. The U.S. Fish and Wildlife Service (USFWS) determines if a given species needs protection under the Endangered Species Act. There are three primary categories to federal listing:

Federal Status Codes

- LE Federal Endangered** – Listed as endangered by the USFWS. The species is in danger of extinction throughout all or a significant portion of its range. Endangered species have legal protection under federal law.
- LT Federal Threatened** – Listed as threatened by the USFWS. The species is likely to become endangered within the foreseeable future. Threatened species have legal protection under federal law.
- C Federal Candidate** – The USFWS is considering federal listing.

The Colorado Division of Wildlife also maintains a list of imperiled species for the state of Colorado. There are three primary categories to state listing:

State Status Codes

- E State Endangered** – Listed as endangered by the Colorado Division of Wildlife. The species is in danger of extirpation throughout all or a significant portion of its range within the state of Colorado. State endangered species have legal protection under Colorado Revised Statutes 33-2-105 Article 2.
- T State Threatened** – Listed as threatened by the Colorado Division of Wildlife. The species is likely to become endangered within the state of Colorado within the foreseeable future. State threatened species have legal protection under Colorado Revised Statutes 33-2-105 Article 2.
- SC State Special Concern** – Listed as species of concern by the Colorado Division of Wildlife.

The Colorado Natural Heritage Program (CNHP), based in Fort Collins manages a large database and ranking system for Colorado species. Their ranking system has two primary components – a ranking for the global status of the species (G), and a ranking for that part of the range found within the state (S). Numeric extensions are added to these on a scale of 1 (extremely rare) to 5 (common).

Natural Heritage ranks should not be interpreted as legal designations. Although most species protected under state or federal endangered species laws are extremely rare, not all rare species receive legal protection.

Global Rank Codes

- G1** Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or because of some factor of its biology making it especially vulnerable to extinction.
- G2** Imperiled globally because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extinction throughout its range.
- G3** Vulnerable throughout its range or found locally in a restricted range (21 to 100 occurrences).
- G4** Apparently secure globally, though it might be quite rare in parts of its range, especially at the periphery.
- G5** Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
- ?** Uncertainty about an assigned global rank.
- T#** Trinomial rank used for subspecies or varieties. These species are ranked on the same criteria as G1-G5.

State Rank Codes

- S1** Critically imperiled in state because of extreme rarity (5 or fewer occurrences, or very few remaining individuals), or because of some factor of its biology making it especially vulnerable to extirpation from the state.
- S2** Imperiled in state because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extirpation from the state.
- S3** Vulnerable in the state (21 to 100 occurrences).
- S#B** Refers to the breeding season imperilment of species that are not permanent residents.
- S#N** Refers to the non-breeding season imperilment of species that are not permanent residents.
- SX** Presumed extirpated from the state.
- ?** Indicates uncertainty about an assigned state rank.

The Rocky Mountain National Park list of Endangered, Threatened and Rare Species does not include State Rank Codes S4 and S5 because these rankings indicate that the species is secure throughout its range.

Scientific Name	Common Name	Status		CNHP Rank	
		Federal	State	Global	State
AMPHIBIANS					
<i>Bufo boreas</i> Pop1	Boreal Toad	C	E	T1	S1
<i>Rana pipiens</i>	Northern Leopard Frog		SC	G5	S3
<i>Rana sylvatica</i>	Wood Frog			G5	S3
BIRDS					
<i>Accipiter gentilis</i>	Northern Goshawk			G5	S3B
<i>Aegolius funereus</i>	Boreal Owl			G5	S2
<i>Amphispiza belli</i>	Sage Sparrow			G5	S3B
<i>Ardea herodias</i>	Great Blue Heron			G5	S3B
<i>Bucephala albeola</i>	Bufflehead			G5	S1B
<i>Bucephala islandica</i>	Barrow's Goldeneye		SC	G5	S2B
<i>Circus cyaneus</i>	Northern Harrier			G5	S3B
<i>Cypseloides niger</i>	Black Swift			G4	S3B
<i>Dendroica pensylvanica</i>	Chestnut-Sided Warbler			G5	S2B
<i>Falco peregrinus anatum</i>	American Peregrine Falcon		SC	T4	S2B
<i>Grus canadensis tabida</i>	Greater Sandhill Crane		T	T4	S2B, S4N
<i>Haliaeetus leucocephalus</i>	Bald Eagle	LT	T	G4	S1B, S3N
<i>Melanerpes erythrocephalus</i>	Red-Headed Woodpecker			G5	S3B
<i>Pandion haliaetus</i>	Osprey			G5	S3B
<i>Setophaga ruticilla</i>	American Redstart			G5	S1B
<i>Vireo olivaceus</i>	Red-Eyed Vireo			G5	S3B
FISH					
<i>Catostomus platyrhynchus</i>	Mountain Sucker		<u>SC</u>	G5	S2?
<i>Oncorhynchus clarki pleuriticus</i>	Colorado River Cutthroat		SC	T3	S3
<i>Oncorhynchus clarki stomias</i>	Greenback Cutthroat	LT	T	T2T3	S2S3
MAMMALS					
<i>Canis lupis</i>	Gray Wolf	LE	E	G4	SX
<i>Felis lynx canadensis</i>	Lynx	LT	E	G5	S1
<i>Gulo gulo</i>	Wolverine		E	G4	S1
<i>Lutra canadensis</i> *	Northern River Otter*		E	G5	S3S4
<i>Sorex hoyimontanus</i>	Pygmy Shrew			T2T3	S2
<i>Sorex nanus</i>	Dwarf Shrew			G4	S2S3
<i>Ursus arctos</i>	Grizzly or Brown Bear	LT	E	G4	SX

Scientific Name	Common Name	Status		CNHP Rank	
		Federal	State	Global	State
INVERTEBRATES (INSECTS)					
<i>Colorado luski</i>	A Buckmoth			G?	S1?
<i>Erebia theano ethela</i>	Edward's Alpine			G4	S3
<i>Hyles galli</i>	Galium Sphinx Moth			G?	S3?
<i>Oarisma edwardsii</i>	Edwards's Skipperling			G4	S3
<i>Oeneis polixenes</i>	Polixenes Arctic			G5	S3
<i>Pachysphinx modesta</i>	Modest Sphinx Moth			G?	S3?
<i>Paratrytone snowi</i>	Snow's Skipper			G4	S3
<i>Pyrgus ruralis</i>	Two-Banded Skipper			G4	S3
<i>Pyrgus xanthus</i>	Xanthus Skipper			G3G4	S3
<i>Speyeria cybele cybele</i>	Great Spangled Fritillary			T5	S1
<i>Speyeria hydaspe</i>	Hydaspe Fritillary			G5	S2
<i>Speyeria nokomis nokomis</i>	Great Basin Silverspot Butterfly			T2	S1
MOLLUSKS					
<i>Acroloxus coloradensis</i>	Rocky Mountain Capshell		SC	G?	S2
PLANTS					
<i>Aletes humilis</i>	Larimer Aletes			G2G3	S2S3
<i>Aquilegia saximontana</i>	Rocky Mountain Columbine			G3	S3
<i>Botrychium echo</i>	Reflected Moonwort			G2	S2
<i>Bortychium lanceolatum var lanceolatum</i>	Lance-Leaved Moonwort			T4	S2
<i>Bortychium lunaria</i>	Moonwort			G5	S2
<i>Bortychium minganense</i>	Mingan Moonwort			G4	S1
<i>Bortychium pallidum</i>	Pale Moonwort			G2	S2
<i>Carex leptalea</i>	Bristle-Stalk Sedge			G5	S1
<i>Cyripedium fasciculatum</i>	Purple's Lady's-Slipper			G4	S3
<i>Cystopteris montana</i>	Mountain Bladder Fern			G5	S1
<i>Draba grayana</i>	Gray's Peak Whitlow-Grass			G2	S2
<i>Drymaria effusa var. depressa</i>	Pinewoods Drymary			T4	S1
<i>Dryopteris expansa</i>	Spreading Wood Fern			G5	S1
<i>Isoetes setacea subsp. Muricata</i>	Spiny-spored Quillwort			G5T5?	S2
<i>Juncus tweedyi</i>	Tweedy Rush			G3	S1

Scientific Name	Common Name	Status		CNHP Rank	
		Federal	State	Global	State
<i>Juncus vaseyi</i>	Vasey Rush			G5?	S1
<i>Liatris ligulistylis</i>	Gay-Feather			G5?	S1S2
<i>Lilium philadelphicum</i>	Wood Lily			G5	S3
<i>Listera borealis</i>	Northern Twayblade			G4	S2
<i>Listera convallarioides</i>	Broad-Leaved Twayblade			G5	S2
<i>Mimulus gemmiparus</i>	Weber Monkey Flower			G2	S2
<i>Papaver kluanense occidentale</i>	Alpine Poppy			T5	S2
<i>Parnassia kotzebuei</i>	Kotzebue Grass-of-Parnassus			G4	S2
<i>Penstemon cyathophorus</i>	Middle Park Penstemon			G3G4	S3
<i>Potentilla effusa</i> var. <i>rupicola</i>	Rocky Mountain Cinquefoil			T2	S2
<i>Pyrola pictata</i>	Pictureleaf Wintergreen			G4/G5	S2
<i>Salix serissima</i>	Autumn Willow			G4	S1
<i>Sisyrinchium pallidum</i>	Pale Blue-Eyed Grass			G3	S2
<i>Viola selkirkii</i>	Selkirk Violet			G5?	S1

Appendix 4
**List of sources used by Rocky Mountain National Park to identify
endangered, threatened and rare species that must be protected if found
within the proposed project site.**

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